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ABSTRACT

A survey mailed to 15,000 students listed as occupational majors in fall 1972, 1974, and 1976 at the three San Mateo County Community College District colleges yielded a 13.3% response rate. Respondents were found to be representative of program completers but not of non-completers. Findings suggested: respondents were predominantly white, half resided within the district, nearly half were in business cluster programs, nearly one quarter were in health, public service and manufacturing programs; 1972 and 1974 respondents were generally employed, with most in professional/technical and clerical/secretarial occupations; 1976 respondents still in school reported full-time employment at 60% for day students, and 85% for evening students, with similar responses from 1976 graduates; about half of the 1972 and 1974 respondents reported a direct relationship between college training and subsequent employment, one third reported some or considerable difficulty in locating work in their training; all respondents evaluated occupational programs and services favorably, with counseling and job placement receiving low ratings; all respondents recommended basic skills and specific occupational techniques courses and increased career counseling. (LH)

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OCCUPATIONAL EDUCATION PROGRAM

STUDENT FOLLOW-UP

JANUARY, 1978

PLANNING AND DEVELOPMENT SERVICES

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

JC 780 047

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OCCUPATIONAL EDUCATION PROGRAM

STUDENT FOLLOW-UP, SPRING, 1977

INTRODUCTION AND SUMMARY OF THE REPORT'S MAIN FINDINGS

Overview of the Study

As part of a general effort to obtain reliable information from past and present students regarding their views of the programs and services offered by the three San Mateo colleges, the San Mateo County Community College District Planning and Development office undertook this Occupational Education Student Follow-up Survey in the spring of 1977. Students representing the full range of AA and Certificate career programs were included in the study. The survey sought information about enrollment and employment along with students' evaluations of and preferences for future programming.

The basic purpose of the study has been to provide, at the District level, a comprehensive, evaluative overview of occupational offerings from the students' point of view. This kind of information is most useful for demonstrating general levels of satisfaction and for indicating areas of potential problems or exemplary performance. In its present form, the study does <u>not</u> provide a complete evaluation of any single occupational education program; to do so would require higher response levels from student participants, as well as data from employers and program staff.

The Occupational Follow-up addresses itself primarily to the following questions:

1. What are the characteristics of students, past and present, who participated in the full range of occupational education programs offered by SMCCCD?

2. What patterns of employment exist for these program participants?

3. What relationship do past program participants find between their college occupational training and subsequent employment or continued education?

4. From the vantage point of the "real world" outside of the occupational program, how do past program participants evaluate aspects of occupational program and related support services? How do present participants evaluate occupational programs and services?

5. Do different subgroups among the occupational student population evaluate programs or services differently?

6. Are certain occupational programs or clusters of programs evaluated substantially lower or higher than most other programs, with regard to specific features of curriculum, instruction, or counseling?

7. What are the most prominent recommendations and preferences for future programming expressed by students in SMCCCD occupational programs?

In order to answer these questions, it was decided to do a comprehensive mail survey. A questionnaire was developed, based on District objectives for occupational education and on the aims and requirements of State and Federal legislation. The instrument built, in a more elaborate form, on the work of the statewide Student Accountability Model (project SAM), currently being pilot-tested for use in the evaluation and planning of vocational education in California's community colleges. The three-page questionnaire sought information regarding the respondents' enrollment, employment since college, current educational plans and preferences, evaluations of SMCCCD programs and services, and their recommendations for the future.

"Occupational programs" were, for the purposes of this survey, considered to include all credit-bearing courses of study designed to provide students with a marketable skill at the end of a one- or two-year sequence of courses. In some cases, programs often referred to as "transfer" courses were included. Thirty-six distinct occupational programs within the twelve occupational cluster categories established by the District in 1974-75 were studied. (See Table 1, page 24, for a list of the programs.)

Students enrolled in occupational programs over a five-year period were included in the sample, so as to take into account the points of view of those with differing amounts of experience after participation in a college program. All students listed as declared "occupational" majors in the fall semester of 1972, 1974, and 1976--a total of 15,000 names--were sent questionnaires in spring, 1977. By intention, the sample included both those who completed programs and those who did not. (Attempts have been made in the analysis to explore differences between these two groups.)

One peculiarity of the sample deserves special note: Due to a shift in college policy whereby Evening Division students were listed as "declared majors" along with Day students, the 1976 subsample of the occupational follow-up contains a large proportion of Evening students; in fact, nearly 40% of the subsample. The 1972 and 1974 subsamples, on the other hand, have practically no Evening students. Thus, comparisons between 1976 resonses and those of the other two subsamples can be misleading; as a consequence, results are reported separately for each subsample year.

Nearly 2,000 students responded to the questionnaire. This is a fairly usual rate of return for a large single-mailing survey of this type. In all probability, the rate of return was considerably better than it appears: an estimated 29% of all people receiving the questionnaire were unreachable at their old addresses and had left no forwarding addresses. On that basis, the overall response rate from those who actually received the questionnaire was about 20%.

Several analyses were performed to determine the degree to which those who filled out the questionnaire adequately represented the overall occupational education population. A comparison of background characteristics between respondents and total population receiving the questionnaire was made, as well as a telephone follow-up of a small random sample of non-respondents.

Although it cannot be assumed to be completely representative of the total population of declared occupational majors, those who responded to the questionnaire in each subsample (fall 1972, fall 1974, and fall 1976) are distributed among colleges and occupational clusters in practically the same proportions as in the respective subpopulations. The age and sex distributions are also very similar to the total population although the responding sample under-represents minority students by a substantial margin. The responding group also under-represents those with few or no units earned up to the semester from which their names were taken for inclusion in the study, which probably means that the responding group more closely reflects those in the total population who either completed their occupational major or who made a substantial effort before dropping out.

The Occupational Education Student Follow-up is seen as a first step towards developing a continuing follow-up process for occupational education offerings. Not only are findings presented, but also suggestions are made regarding the conduct of similar studies in the future. As follow-up studies are repeated over time, colleges will be provided with regular comprehensive information, such as that presented in this report, and with more focussed follow-up of specific programs, as illustrated by the recent study of the Administration of Justice program. Employer follow-ups are also intended, in addition to studies based largely on students' perspectives, so that the students' views of their training at SMCCCD can be corroborated, amplified, or in some cases, contested.

In this summary section, the main findings of the study will be presented, organized by the seven priority questions listed above. References will be made to more detailed explanations later in the text for those who wish to read the analysis in more depth. A summary of further questions arising out of the study and remaining to be researched will also be presented, along with an analysis of the follow-up process itself and suggestions for improving it.

* * * * * *

Note: While reading the following summaries of the analysis, it is useful to keep in mind the following limitations:

1. Respondents include both those who completed occupational programs and those who did not. (Wherever noticeable differences exist between these two groups, these have been pointed out.)

2. Respondents appear generally representative of those in the overall occupational program population who persisted in their program a considerable length of time or else completed it. The full range of non-completers is not represented.

3. Overall response rates are low. Results are best thought of as suggestive, rather than conclusive.

4. The 1976 subsample differs substantially from the other two subsamples, in that it contains large numbers of Evening students. Comparisons between it and the other two subsample years are likely to be misleading and have been avoided in the analysis.

5. The present study is a student follow-up: It represents only the opinions and perceptions of students. It in no way constitutes a full evaluation of any single occupational program offered by San Mateo County Community College District.

Question 1: What are the characteristics of past and present occupational program participants?

The occupational education student population in each of the three subsample years consists of people who are as likely men as women, as likely older than the age of 25 as younger, and predominantly white. A large number of the overall population of declared occupational majors had earned no units or few units in their occupational major up to the semester from which their names were taken for inclusion in the study. Nearly half of the total population of occupational majors, and half of the responding group, reside in four cities within the District: San Mateo, Redwood City, South San

Francisco, and Daly City. The Business Cluster of programs accounts for nearly half of the population, with nearly another quarter taken up by programs in the Health, Public Service and Manufacturing areas. One cluster, Environment, is virtually non-existent, consisting of no more than 0.1% of the total occupational education population.

On the basis of questionnaire, the three subsample populations can be more completely characterized.

a. Past students (1972, 1974 subsamples): Between three-quarters and four-fifths of the respondents have completed a degree or certificate program, a proportion considerably greater than the actual percentage of enrolled occupational students who, in fact, complete in any given year. Approximately half of the respondents have gone beyond the sophomore level in their education, but only a small percentage (about 15%) have completed a bachelor's degree or higher. Very few of the respondents from past occupational programs are now enrolled in SMCCCD continuing education courses, but a large majority, approximately three-quarters, indicate an intention to take courses at District colleges at some time in the future. Most enrolled for an occupationally related reason; that is, to prepare for, advance in, or re-train for a job--yet a substantial proportion (approximately 40%) do not give any job-related reasons for enrollment, giving instead interest in the subject and/or the desire to get a degree/certificate as their reasons. The average age of respondents from past programs is 27 (1972 subsample) and 26 (1974 subsample), indicating that, on the average, they were fairly young when enrolled in the program.

b. "Recent" students (1976 subsample): Sixty percent of this subgroup had not completed a program by the time they responded to the questionnaire in spring, 1977. Day students and Evening students are also mixed together in this subsample, and it is useful to distinguish in several respects the characteristics of each subgroup. The Day subgroup is younger (average age, 27) although not so young as one might expect, if the trend of the previous years is taken into account. In addition, the Day students are less likely to have gone beyond the sophomore year in their education. Evening students, by contrast, average 38 years old, and approximately half of them have continued their education. Reasons for enrolling in occupational programs for both subgroups appear to resemble those of the past students, with a substantial minority indicating no specific job-related reason for their participation in occupational programs. (For detailed analysis, see Sections A and B, Part Two, pages 23-34; Section G, pages 64-66.)

Question 2: What patterns of employment exist for program participants?

a. Past students (1972, 1974 subsamples): Respondents from past programs are, for the most part, employed. Between three-fifths and four-fifths of completers and between one-half and two-thirds of non-completers have full-time jobs. An additional 10 to 20% have part-time jobs. Of the non-employed remainder, most are not seeking employment. The group is employed in a broad range of jobs and a broad spectrum of different industries. The largest portion of respondents reports occupations in the "professional/technical" and "clerical/secretarial" categories.

Respondents reported their income ranges freely, which show a considerably lower level of income, on the whole, than those of the overall Evening student population, as reported in the Evening Program Evaluation Report of August, 1977. The median income for the full-time employed fell between $9,600/year - $12,000/year. The median income for the part-time employed fell between $2,400/year - $4,800/year. Among the full-time employed, those who have completed programs appear to have salaries slightly higher than those respondents who had not completed a program. (See Part Two, Section C, pages 41-44; Section G, pages 62-64.)

b. "Recent" Students (1976 subsample): For the majority of these students, who were still enrolled in an occupational program at the time of the survey, employment information is not particularly meaningful, except to note that most report full-time employement (nearly 60% of Day students; 85% of Evening students).

For those in the 1976 subsample who had completed a program, Day and Evening students reported full-time employment in proportions nearly identical to those who were still enrolled in a program. The average salary levels of Evening Division completers were considerably higher than those of Day Division completers. The median income for Evening completers fell into the range $14,400/year - $16,800/year, while those of Day completers fell into the range of $7,200/year - $9,600/year. This substantial difference probably reflects the fact that the Evening student population includes many older people (average age, 38) who have been in jobs and careers for a much longer time. (See Part Two, Section G, pages 64-66.)

Question 3: What relationship do past program participants find between their college occupational training and subsequent employment or continued education?

To answer this question, special attention was paid in the analysis to respondents from the 1972 and 1974 subsamples, since these persons would have had sufficient time in the job market after participating in SMCCCD programs to gain a useful perspective on the training-to-employment relationship.

About half of the respondents in each subsample year report a "direct" relationship between college training and subsequent employment, and another quarter find training and employment "somewhat related." Those who had completed programs were considerably more likely to report a direct relationship than those who had not completed programs.

To the extent that one can determine from the responses received, people in the different occupational clusters and programs differ only slightly in the proportions of respondents reporting a relationship. In most programs, 75% or more indicate some relationship between college training and work, and in all but one case (Aeronautics Flight Training) at least 50% find some relationship to exist. Respondents from certain programs report particularly high proportions of people in "directly related" employment, especially Health Occupations and Cosmetology. Other programs have noticeably fewer respondents in directly related employment, especially in the Business area and Aeronautics/Flight Training.

Again based on 1972 and 1974 subsample responses, it appears that not all of the respondents have found it easy to find employment in the area of their

training; about a third report "some" or considerable difficulty. This is especially true for the Transportation (Aeronautics) and Public Service (Education, Recreation, Fire Science) clusters, with more than two-thirds of the respondents in each case reporting some difficulty finding a related job. A few programs, such as Cosmetology, show practically no difficulty getting related employment. Note that completers on the whole do not find it much easier to get related employment than do non-completers (who also sought the related jobs).

From the respondent' points of view, participation in an occupational program appears to have had some effect on pay for about three-fifths of the 1972 and 1974 subsample. About half of each subsample feel that some increase in rank has resulted from their participation in occupational programs. (Note that a large number of all respondents feel that questions about increases in pay and rank do not apply to them.) Here, there was clear evidence that completers are more likely to report increases in pay or rank as a result of their college training than non-completers.

The questionnaire did not deal adequately with the relationship of college occupational training to continued education; no results have been reported for this area. (See Part Two, Section C, Pages 41-44, and Part Three, pages 90-93.)

Question 4: How do program participants, both past and present, evaluate occupational programs and related support services?

On the whole, respondents evaluate the programs and services of the District favorably. This finding is true for both past and recent students, completers and non-completers in each subsample year, and for both Day and

Evening students in the 1976 subsample. Average ratings of many aspects of instruction, curriculum, and counseling were all in the positive range. On the whole, items relating to instruction and curriculum were rated more highly than those relating to counseling or job placement.

The generally lower level of ratings in the counseling area was examined in more detail. In order to properly interpret these findings, it should be noted that for the most part, results reflect half or fewer than half of the respondents in each subsample year (many checked "does not apply; no opinion" or left the questions blank), and that a smaller percentage (40%) in each subsample report using Counseling Services or Job Placement. Access to counselors appeared to be one of the big problems, as there was unambiguous evidence that those who were able to make use of Counseling or Placement Services evaluated them more highly than those who did not. Although their judgments may in some ways be premature, respondents from the most recent subsample (1976) were, on the whole, more satisfied with counseling efforts than past students. (Note also that the 1976 subsample contained many Evening students, for whom Counseling Services are not as available.) Respondents from the earliest subsample year (1972) were the least satisfied with Counseling Services, which suggests that some efforts to improve counseling may have taken effect. Still, it is clear that for a large number of both past and recent students, more emphasis on career counseling is a high priority concern (of fifteen recommendations, this recommendation was the third most frequently checked). (See Part Three, pages 94-103

The Co-op Work Experience Program was also examined. It appeared to be generally well received, although not seen as a high-priority item within the general list of recommendations, and with a possible decreasing proportion of

the occupational education enrollment involved. However, certain instructional elements related to Co-op--making instruction more practical and giving more credit for work experience--were given increasing priority by successive subsample years. (See Part Three, pages 94-103.)

Certain general aspects of the SMCCCD instructional program received higher average ratings from the responding sample in each subsample year: the degree to which the occupational program satisfied the needs and interests of respondents, the location of the programs, and the appropriateness of their facilities. The pattern was the same in each subsample year. One aspect was rated noticeably lower: the degree of adjustment within occupational courses for individual differences in ability and interest, which received an only marginally favorable average rating. This fact, coupled with the high priority placed on the recommendation, "more individualization of instruction," suggests that something about "individualization" is of real concern to a large proportion of respondents. The implication of this finding for programs, however is not clear: "individualization of instruction" or "adjustment for individual differences in ability or interest" can mean many different things to many people. A possible implication--more innovative teaching formats such as television or computer-assisted instruction--is not supported by the data. (See Part Two, Section D, pages 45-51.)

Question 5: Do different subgroups among the occupational student population evaluate programs or services differently?

Various subgroups, as defined by dividing the total responding sample into contrasting categories on selected background characteristics, were compared to determine any patterns of difference in the way they evaluated SMCCCD programs

and services. The subgroups compared included: men versus women, those over the age of 25 versus those under 25, white versus minority students, those who had completed programs versus those who had not, those with greater than a sophomore level of education versus those with sophomore level or less, and those with incomes about $9,600 versus those with incomes below that figure.

Few substantial subgroup differences were detected at the level of the District, confirming a pattern observed in the Evening Program Student Evaluation of August, 1977. Noticeable patterns among past students included: generally higher levels of ratings for older students, those who had completed programs, for women and low-income respondents (in the 1974 subsample), and for minority students and those with more education (in the 1972 subsample). Among recent students (1976 subsample), women and older students tended to rate programs higher. Otherwise, no obvious patterns were found at the District level. Important subgroup differences may well exist at the level of individual programs, but pursuing such differences is beyond the scope of this report. (See Part Two, Section P, pages 54-61.)

Question 6: Are certain occupational programs or clusters evaluated significantly higher or lower than the others regarding specific features of curricula, instruction, or counseling?

Considerable variation in average evaluation ratings appeared when the average ratings on selected evaluation items of the separate cluster groups were compared, although it should be noted that the response from several of the smaller clusters (e.g. Agri-business/Natural Resources, Personal Service, Recreation and Hospitality, and Marketing and Distributing) was low enough, especially in the past subsamples, to make cluster-level data extremely tentative. One cluster--Environment--was found to be essentially non-existent.

In the past subsamples (1972 and 1974), the Personal Service cluster stood out as consistently higher than average across a number of ratings. The Health Occupations cluster had noticeably lower-than-average ratings on items concerning instruction, although with some higher-than-average ratings regarding curriculum.

For recent students (1976 subsample), three clusters drew noticeably higher-than-average ratings on a number of items: Recreation and Hospitality, Communications, and Consumer and Homemaking. Again, the Health Occupations cluster appeared lower than average on items concerning instruction and the availability of counselors.

The Business cluster was generally too large and heterogeneous to show any tendencies one way or the other at this level of analysis. Other clusters, as represented by both past and present respondents, were either close to District averages on a number of items, or showed a more mixed pattern with some items higher than average and others lower than average.

Again separating the data by subsample years, the preceding analysis was carried to the level of the individual program in all clusters. Where individual programs had enough respondents, comparisons were made between average evaluation ratings for the program and average ratings for the District as a whole. Note that the following assumptions were made for program-level analysis:

1. A response by more than ten people and representing more than 10% of those receiving the questionnaire would be worth including in the analysis.

2. Findings were not separated by college, although for a number of programs this was not necessary, as the program is offered only by one college.

3. Findings at the individual program level must only be taken as suggestive rather than conclusive, due to the low levels of response (especially in the smaller programs and in the earlier subsample years).

4. Most "lower-than-average" ratings were still in the positive range of the rating scale.

Several programs stood out as consistently higher or lower than District average ratings across a number of items in the questionnaire. These have been noted below:

Past programs (based on 1972 and 1974 subsample responses): Drafting and Telecommunications were rated noticeably higher than average, while Data Processing was rated consistently lower than most. The Medical Assisting and Business Administration programs were also noticeably lower than average in several respects.

Recent programs (based on responses from the 1976 subsample): Drafting again stood out as considerably higher than average, along with Secretarial/Clerical programs, the Food Services/Technology program, and the Travel/Tourism program. Data Processing was again considerably lower than average, as was the Fire Science program. Nursing (LVN) was also consistently lower than average.

Other specific programs for which sufficient responses were received, either in the past subsamples or the 1976 subsample, were either close to District averages or else showed a mixed pattern with some ratings higher than average and others lower. (For example, Accounting and Respiratory Therapy showed such a mixed pattern.)

In general, where programs consistently drew noticeably higher or lower average ratings, the findings corroborated the opinions of college personnel and lent further support to efforts, already underway in several cases, to

remedy the program difficulties.

It was seen as beyond the scope of this report to cast about for factors associated with the significantly higher or lower ratings, yet this analysis is seen as an important next step in the process of trying to pinpoint both problems and exemplary practices. (See Part Three, pages 70-88.)

Question 7: What are the respondents' more prominent recommendations and preferences for future programming?

Patterns detected within the evaluations were supported by the five more frequently checked recommendations out of a list of fifteen possibilities. Both past and present students checked the same five recommendations most frequently. Two of the five recommendations have already been mentioned, concerning career counseling and individualization of instruction. In addition, respondents urged SMCCCD to place more emphasis on courses in basic skills, courses in specific occupational techniques, and on practical application in course instruction.

Certain subgroups favored one or another recommendation disproportionately. Younger respondents and those with lower incomes (including many part-time employed) recommended more individualization and more emphasis on career counseling. Women urged individualization more than did men. Those who had completed programs recommended practical application in course instruction and an emphasis on career counseling more than did those who failed to complete.

More than two-thirds of respondents indicated an intention to take more courses at SMCCCD colleges sometime in the future. Of those who specified areas of interest, nearly a third wrote in non-occupational subjects. Areas

of occupational interest were distributed in roughly the same proportions as the distribution of programs in the overall responding sample. Most favored a traditional instruction format, lecture/discussion or lab/demonstration classes, taught on weekday mornings or evenings. (See Part Two, Sections D, E, and F, pages 45-61.)

What Further Areas of Research are Needed?

A comprehensive survey of this kind is effective in giving one a broad overview of some area of instructional functioning but is less suited to the task of providing in-depth understanding of particular programs or problems. A first and critical priority for further research is to focus more closely on individual programs where a particular need to examine or reassess a program's operation is felt by those with responsibility for the program. Individual programs can be studied with a survey approach such as this one, but using smaller samples, allowing for a more diligent attempt to get higher response rates and with individually tailored instruments designed to focus on the concerns and needs of the program in question. (See Appendix F, "Sample Data Summary for an Individual Program.")

This study can be one means, but not the only means, of identifying programs for further study. Several programs have emerged from the analysis as exemplary ones, receiving consistently high ratings from students in a number of respects; others have appeared to bring consistently lower evaluations from students, suggesting that in some ways the functioning of these programs could be improved. Yet it should be clear that this study is only one step in a continuing attempt to learn more about SMCCCD's operations from those whom it attempts to serve.

The analysis of this survey can go further in its attempts to correlate positive or negative evaluations with characteristics of students and data

regarding their employment. To do so for each program is an unmanageable task with limited resources. To do so with a few programs which District personnel agree are prime candidates for more careful review is a logical next step for gaining the greatest benefit from the data which has been gathered. The data has been stored in a format which allows for easy access by computer. Further questions may be asked of the data, either in the near future or several years hence, in order to make longitudinal comparisons.

Analysis of the Follow-up Process and Suggestions for Improvement

It is important to try to take advantage of the experience gained from this first round of the Occupational Education Student Follow-up so that studies of this kind can be improved. The following points may be helpful in this regard:

1. Reduce the scope of the study and intensify follow-up efforts. In other words, try to cover one past year (with or without a sampling of students presently enrolled). Alternatively increase the resources allotted to the study so that substantially better response rates are possible, through such devices as a second mailing of the questionnaire with an additional postcard reminder. The goal is to be able to go after respondents more diligently, and to leave less room for non-response. At the least, allow for a substantial random sample follow-up of non-respondents (at least several hundred).

2. Develop a more certain definition of "occupational major" and "occupational program." Faced with massive problems of adequately identifying either, this year's study took the lines of least resistance: all declared majors were surveyed, and all ocupationally oriented degree major codes were included. An improved study would rest on the resolution among relevant college and District personnel of some key questions: Beyond declaring a major in a given semester, what amount of participation in an ocupationally oriented sequence of courses defines legitimate involvement in an occupational major? How specifically tailored to a specific slot in the job market must a course sequence be to be considered an "occupational program"? Where are the meaningful boundaries between programs, given that many majors are only slight variations on each other? How important is it to hear from non-completers, and is the same information desired? (This year's study was geared more towards program completers.)

3. Develop a more focussed sampling plan. Based on better definitions of occupational majors and with knowledge of the relative size of each occupational program, develop a stratified sampling plan so that large majors (especially in the Business area) are randomly sampled to reduce the number of questionnaires mailed out, while smaller majors are more intensively sampled.

4. Amend the questionnaire so as to measure relationship between college occupational training and continued education. Although not applicable to every program, many occupational majors serve as springboards to further, and often related, education as well as to employment. Tracing these links would increase the understanding of occupational program effects.

5. Sharpen the measures of certain variables within the questionnaire. Although this is not the place to review the items in the follow-up instrument, much has been learned in this year's administration of the questionnaire about the ways in which respondents interpret the items. Many questions can be, through subtle changes in wording and format, substantially improved. Prime candidates for improvement are measures of the relationships between college training and employment, program completion, and evaluation of program.

6. Add other background measures, especially Evening/Day division status and GPA.

7. Make items more flexible, to better accommodate the points of view of past and present students, assuming that it is agreed to keep present students in the follow-up.

8. Consider more carefully the question, "For whom is the follow-up being done?" How can the special needs of these audiences be better served, either through the timing or content of the follow-up process?

This Follow-up Study provides a first and important benchmark on a District-wide basis, concerning the nature and effects of SMCCCD's occupational education efforts. Hopefully it has raised questions in addition to the many questions it has answered. If so, it has done its part in contributing to the understanding of all those who take part in and have responsibility for the District's educational program.

But the data from this Occupational Follow-up have distinct limitations. First, programs with generally small enrollments are not well represented in a

single-mailing, low-response survey of this kind, although respondents from these programs do contribute to an understanding of the clusters in which the programs reside. Second, some of the measurements are somewhat crude; for example, the assessment of the relationship between college training and employment, the determination of completion of a specified occupational program, or the determination of the precise occupational title and area of employment. Third, this kind of study makes large assumptions about enrollment history and employment history which do not do justice to the individual variation in the experiences of community college students. Fourth, the low-response rate leaves considerable room for interpretations which are not completely testable. Fifth, the survey questionnaire does not assess adequately the relationship of college training to continued education.

Also, one must remember that this is a student follow-up. It leaves out the evaluations of student preparation which employers and supervisors are able to make on the job. It also neglects the views of those who directly administer and instruct in occupational programs. It is hoped that this study will be supplemented and deepened by the understanding which can be gained from the employers' and the teachers' vantage points. These perspectives must also be systematically sought so as to represent fairly their opinions and recommendations of persons who work with students while or after these students receive training in the District's occupational programs.

DETAILED ANALYSIS

In the following sections, the details of analysis will be explained, with results presented in tabular form. Part One deals with the question of representativeness--to what extent does the responding group reflect accurately the total population of occupational program participants who received the questionnaires?

Part Two presents data aggregated at the District level, regarding respondents' background, enrollment, and employment characteristics, their evaluations and recommendations regarding SMCCCD programs and services, and their educational plans and preferences for the future. This section will also explore the extent to which different subgroups within the responding group evaluate SMCCCD differently.

Part Three breaks down the data to the level of the individual program within each occupational cluster. Differences in the evaluations and recommendations made by respondents within each program are examined, along with variations in their rates of program completion and the degree of relationship they report between college and employment. Data pertaining specifically to the Counseling and Job Placement Services, and to the Co-op Work Experience Program are also presented in this section.

PART ONE: TOTAL POPULATION, RESPONDING GROUP, AND THE QUESTION OF REPRESENTATIVENESS

This section will first present the manner in which the total population of occupational program participants was defined. Three analyses are then performed to determine how well the responding group represented the total population: (a) a comparison between responding group and total population of the distribution of people among colleges and occupational clusters; (b) a comparison between respondents and total population regarding the distribution of selected background characteristics; (c) the results of a telephone follow-up of a small random sample of non-respondents. At the end of the section, systematic differences between respondents and total population are noted.

Special attention should be paid throughout this report to the differences between the populations surveyed in each of the three subsample years: 1972, 1974, and 1976. As explained in this section, the three years are not equivalent, and comparisons between them to establish trends can be somewhat misleading, particularly when comparing the 1976 subsample with the other two. Comparisons between the 1972 and 1974 subsamples can be more safely done. The basic reason for this has to do with a change in District policy whereby Evening Division students have been listed on college records as declared occupational, whereas formerly they were for the most part not so listed.

Total Population of Occupational Program Participants

A pool of potential respondents was assembled, comprising all students listed on college master files as declared majors in any of the 85 majors considered

"primarily occupational" for the purposes of the study. As many of these majors were essentially variations on a central theme, they were further grouped into 36 relatively distinct "occupational programs."

TABLE 1
OCCUPATIONAL EDUCATION PROGRAMS INCLUDED IN THE FOLLOW-UP STUDY, GROUPED WITHIN OCCUPATIONAL CLUSTERS

Agribusiness & Natural Resources	Manufacturing
Horticulture	Electronics
Landscape Design	Machine Tool Technology
	Welding Technology
Environment	
Environmental Technology	Personal Service
	Cosmetology
Transportation	
Aeronautics Pilot Training	Recreation and Hospitality
Aeronautics Airframe and Powerplant Maintenance	Food Technology
	Travel/tourism
Consumer and Homemaking	Business
Home Economics	Dental Assisting
	Medical Assisting
Communications and Media	Transportation
Drafting	Accounting
Technical Illustration	Banking and Finance
Telecommunications	Secretarial/General Clerical
	Legal Secretarial
Health Occupations	Management
Nursing (2 yr RN & LVN)	Administration
Respiratory Therapy	Real Estate
X-ray Technology	Data Processing
Gerontology	
	Public Service
Marketing & Distribution	Early Childhood Education
Merchandising	Educational Assistant
Interior Decoration	Fire Science
	Recreational Leadership
	(Administration of Justice)*

*Administration of Justice was excluded from this round of the Occupational Education Follow-up because it had recently been surveyed as part of the more focussed Administration of Justice Study.

A list of these programs arranged within the general "occupational cluster" categories established by the District in 1974 is shown in Table 1, "Occupational Education Programs Included in the Follow-up Study." (For a more complete listing of all majors and major codes included in the study, see Appendix A.)

Fifteen thousand unduplicated names were generated from college records to form the potential respondent pool. The distribution of people receiving mailed questionnaires, broken down by college and semester of selection, appears below in Table 2:

TABLE 2

DISTRIBUTION OF TOTAL OCCUPATIONAL STUDENTS RECEIVING QUESTIONNAIRE BY COLLEGE AND SEMESTER OF SELECTION

	Fall 1972	Fall 1974	Fall 1976	TOTALS
Skyline	412	556	1,452	2,420
Canada	382	513	1,471	2,366
College of San Mateo	2,542	2,722	4,950	10,214
Totals:	3,336	3,791	7,873	15,000

Note: These numbers do not reflect actual enrollment figures. In all cases, they somewhat overestimate the number of people actually attending courses in their declared major for the full semester in question. This was done in order to include occupational education participants who might not be active during the semester of selection, or who rather suddenly changed their minds and dropped out of a given major in mid-semester.

The total population of 15,000 includes a small percentage of people "registered only," i.e., those who never appeared for class, as well as a number who

attended classes for awhile and dropped out. Also, due to a change in college policy whereby Evening students began to declare majors, the 1976 pool of students was considerably larger than that of 1972 and 1974—due largely to the nearly 40% Evening students included. By contrast, the 1972 and 1974 respondent pools contain only a small percentage of Evening students (approximately 6% in each case).

What appears to be a large and sudden increase in enrollment in 1976 (7,873) is due primarily to the large number of Evening students in the 1976 listing of declared majors. Also, duplicate names were removed so that the latest year of registration was retained. A person enrolled in fall, 1974, and again in fall, 1976, would be included in this study as part of the 1976 subsample. Because of this way of removing duplicates, the 1972 and 1974 subsamples are proportionately somewhat smaller than they would be had actual enrollment figures been used.

Because of the disproportionately large number of questionnaire recipients in the fall, 1976 subsample, comparisons between 1976 responses and those of 1972 and 1974 may well be misleading. What appears to be a trend may in fact only be a result of the presence of Evening students in the 1976 subsample and their absence in the other subsamples. Also, frequencies of response for the total responding sample will be heavily weighted towards the 1976 subsample, simply by virtue of their large numbers. The 1972 and 1974 subsamples are more comparable. Consequently, responses are for the most part reported and analyzed separately by subsample year.

The reader is reminded that all respondents received and replied to the questionnaire at the same time--spring, 1977. The differences between the subsamples are as follows:

1972 Subsample:	includes people who most recently appeared as a declared occupational major in the fall semester of 1972. Does not include those enrolled in 1972 who were still enrolled in 1974 or 1976.
1974 Subsample:	includes those whose most recent registration was the fall semester of 1974. Does not include those enrolled in fall, 1974 who were still enrolled in 1976.
1976 Subsample:	includes all declared occupational majors on college records in fall, 1976. This number includes a large proportion (approximately 40%) of Evening students.

Of the 15,000 questionnaires mailed out, 1,991 were returned, for an overall response rate of 13.3%. Predictably the response rates for the 1972 subsample (9.5%) and the 1974 subsample (12.9%) were somewhat lower than that of the 1976 subsample (14.2%). In a large, single-mailing survey of this type, where no procedures were taken to boost the rate of response, this rate of return is not unusual. In all probability, the response rates were much better than they appear. An estimate of the proportion of the total population unreachable by mail, based on the random sample of non-respondents--at least 33%--suggests that only 10,000 actually received a questionnaire. In that event, the overall response rate is about 20%.

The Representativeness of the Responding Group

It is essential in this kind of low-response survey to assess how well the responding group reflects the total population who received questionnaires.

Only with full knowledge of systematic differences in the responding group can reasonable generalizations be made.

a) Distribution of Colleges and Occupational Clusters in the Total Population and Responding Sample

As can be seen from Table 3a, the distribution of responses among colleges closely resembles the corresponding distribution in the total sample.

TABLE 3a

COMPARING THE DISTRIBUTION OF RESPONDENTS FROM EACH COLLEGE TO THE PROPORTIONS WITHIN THE TOTAL POPULATION

	1972		1974		1976	
	% of Total Pop.	% of Respon-dents	% of Total Pop.	% of Respon-dents	% of Total Pop.	% of Respon-dents
Skyline	12.4%	12.0%	14.7%	14.9%	18.4%	18.9%
Canada	11.5	10.4	13.5	12.2	18.7	19.7
CSM	76.1	77.6	71.8	72.9	62.9	61.4
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
N=	3,336	317	3,791	491	7,873	1,111

Similarly, it is clear from Table 3b that occupational clusters are represented in approximately the same proportions among returned questionnaires as among the total population receiving questionnaires.

TABLE 3b

COMPARING DISTRIBUTION OF RESPONDENTS FROM EACH OCCUPATIONAL CLUSTER TO THE DISTRIBUTION IN THE TOTAL POPULATION

	Proportions in Each Subsample Year					
	1972		1974		1976	
Occupational Clusters	% of Total Pop.	% of Respon-dents	% of Total Pop.	% of Respon-dents	% of Total Pop.	% of Respon-dents
Agribusiness/ Natural Resources	1.7%	0.6%	1.5%	1.8%	1.4%	1.9%
Environment	0.0	0.0	0.1	0.2	0.2	0.3
Transportation	9.5	6.9	6.0	6.1	5.8	5.1
Consumer and Homemaking	5.4	5.7	3.5	4.3	2.9	2.7
Communications and Media	8.6	7.8	8.5	8.0	6.0	4.6
Health Occupations	11.1	15.4	15.0	17.1	4.0	4.2
Manufacturing	8.6	11.1	7.5	10.2	7.0	6.4
Personal Service	2.4	2.2	3.3	2.7	4.0	2.9
Recreation and Hospitality	1.0	0.3	1.6	1.0	4.7	4.8
Business	45.9	43.8	43.2	39.5	53.9	56.8
Marketing and Distributing	1.6	1.6	3.0	2.2	2.9	2.4
Public Service	2.2	2.2	6.7	6.5	6.8	7.5
Non-Occupational Miscellaneous	1.9	1.9	0.1	0.4	0.3	0.4
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
N =	3,336	317	3,791	491	7,873	1,111

Several slight biases in the responding group are worth noting. Responses in the 1972 subsample year slightly favor the Health Occupations and Manufacturing, as compared to the original population. Those in the 1974 subsample slightly favor Health and Manufacturing, while under-representing slightly the Business cluster. Those in the 1976 subsample slightly over-represent the Business cluster, while somewhat under-representing the Communications and Media cluster.

A glance at Table 3b reveals one other extremely important fact: the extremely large proportions of the total population and responding sample represented by the Business programs, are in each case approximately half. This fact will greatly aid interpreting response totals later in this report.

b) Comparing the Distribution of Background Characteristics in Total Population and Responding Sample

A second check of the representativeness of the responding sample involves comparing the distribution of background characteristics among those responding and the total group receiving the questionnaire. Four characteristics were considered: age, sex, ethnicity, and number of units completed by the semester from which the person's name was taken for the study. For simplicity sake, the results of these comparisons are displayed in Table 4, "Comparing Respondents with Total Population, on Selected Background Characteristics," for the whole population, not broken down by years. The patterns seen in the table are substantially similar, when the comparison is made separately for each subsample

year, with one exception: a somewhat larger proportion of older people responded in the 1976 subsample than in the other two.

TABLE 4

COMPARING RESPONDENTS WITH TOTAL POPULATION RECEIVING THE QUESTIONNAIRE, ON SELECTED BACKGROUND CHARACTERISTICS

(Reported for Total Population and Total Responding Sample)

Background Characteristic	% in Total Population	% in Responding Sample
Age: % 25 years or older	45%	49%
Sex: % Female	48	52
Ethnicity: % White	77	84
Units Earned: % 30 or more	36	48

The responding sample has a slightly higher proportion of older students than does the original population, and a slightly higher proportion of women. More substantial differences are apparent in the lower proportion of minority respondents and the higher proportion of respondents who had earned more units. The fact that a lower proportion of students responded who had less than 30 units earned is due primarily to those in each subsample year who showed no units earned at all--in other words, people who might have dropped out early or "registered only" for majors without ever following through. This tendency makes the responding sample more accurately reflect those who at least gave their occupational program a good try, though they may not have completed it. The bias in favor of white respondents is less fortunate; one must simply keep in mind throughout this report that the range of opinion among minority students in consistently underrepresented.

c) Random Sample of Non-respondents

A final effort at estimating the representativeness of the responding sample was undertaken in the form of a small random sample of non-respondents (N = 124) contacted by telephone and urged to respond to a second mailing of the questionnaire. Locating non-respondents was sufficiently difficult as to make the results of this effort statistically unreliable. Only 25 of the questionnaires were returned.

A breakdown into categories of response of the people in the telephone follow-up reveals several interesting patterns:

	N	%
Returned questionnaire	25	21%
Refused to send in questionnaire	5	4
Neglected to send in questionnaire after promising to do so	26	21
No answer after repeated calls; questionnaire not returned	27	21
Unreachable by mail; phone disconnected; moved away	41	33
	124	100%

A very large proportion, at least 33%, were simply unreachable at the address listed on college records. Very few flatly refused to cooperate, though a substantial portion failed to return questionnaires after promising to do so.

Although it is unwise to put too much weight on the incomplete information yielded by this follow-up of non-respondents, it is interesting to note that those

non-respondents who did return the second mailing show practically no differences from the overall responding sample, either in terms of the proportion employed, proportion having completed a program, proportion who had gone beyond the sophomore level, or in terms of their evaluation ratings of SMCCCD programs and services.

d) Write-in Comments

Write-in comments on questionnaires have suggested several systematic differences between those who responded and those who did not. Many people who were still in the program at the time they received the questionnaire did not fill it out but sent a note instead indicating that they felt their names had been taken by mistake (the cover letter and phrasing of the questionnaire were aimed primarily at occupational program graduates). Others who had gone on from community college to a four-year school felt that they did not belong in the study as well. Finally, some who had only taken one or two courses for personal interest but for some reason were listed on college records as a declared occupational major sent in blank questionnaires with a note explaining that they did not think they could adequately judge the program on the basis of one course. Non-response from these three groups of people probably worked to the advantage of the study by weeding out those who did not really think of themselves as an "occupational major," those who had not even had a chance to complete a program, and those who were never really a part of an occupational program even though they took an occupational course or two.

Summary: Comparing the Responding Sample with Total Population

To summarize, the responding sample appears representative of the population receiving questionnaires in many ways. The distribution of respondents by college and occupational cluster closely parallels that in the population at large; age and sex distributions are very nearly the same. The following systematic differences, however, have been detected. The responding population contains:

i. a larger proportion of white students

ii. a larger proportion of students who had completed 30 or more units by the semester from which their names were taken

iii. a slightly higher proportion of older students and female students

iv. a lower proportion of those who had moved away prior to the questionnaire mailing

v. a lower proportion (assuming that write-in comments reflect a more general tendency) of those who transferred to a four-year institution, those who are presently enrolled in an occupational program (especially true of people in the 1976 subsample), and those who took only one or two courses but were not really occupational majors.

Other systematic differences may exist but are difficult to detect. The ensuing analysis in this report will proceed on the assumption that those who responded are reasonably representative of a population of people who in the preceding five-year period participated in occupational programs for more than casual interest (although not necessarily completing one) and who thought of themselves as an "occupational education student," indicated by their reporting their occupational majors. This study recognizes that this assumption is not fully testable.

PART TWO: DISTRICT LEVEL DATA

In this section, basic descriptive information about the respondents is presented, summarizing both the background information taken from college records and the responses to the questionnaire. Data is aggregated at the District level, merging all colleges together, for each of the three subsample years.

The reader is reminded again that apparent trends, observed by comparing either the 1972 or 1974 subsamples with that of 1976, can be misleading due to the large numbers of Evening students in the latter subsample.

Data will be presented and interpreted in this section, following the general outline of the questionnaire: respondent's background and enrollment characteristics, employment characteristics, evaluations of SMCCCD programs and services and recommendations, future educational plans and preferences. At the end of the section, the question will be considered and investigated: do subgroups within the responding sample, i.e. men vs. women, older students vs. younger students, etc., evaluate the occupational program differently? Finally, selected differences between completers and non-completers, and between Day and Evening students in the 1976 subsample, will be examined.

A. Background Characteristics

As we have seen in the discussion of representativeness in Part One, the overall responding sample divides fairly evenly between men and women, between those over 25, and between those who had completed 30 units or more at the semester of subsample selection. In addition, the respondents are for the most part white.

As can be seen in Table 5, "Background Characteristics of Respondents," these patterns hold for the most part across each of the subsample years, with the greatest exceptions occurring predictably in the 1976 subsample year, which contains a greater number of older respondents and more minority respondents than the other two subsamples. One other difference stands out: the greater proportion of people having completed more than 30 units in the 1972 subsample year.

Table 5 also indicates that nearly half of the respondents in each subsample year come from only four cities within the District: Redwood City, San Mateo, South San Francisco, and Daly City. Other cities with a substantial proportion of the total responding sample include: San Bruno (7.4%), San Carlos (6.7%), Belmont (5.9%), Pacifica (5.3%), Burlingame (5.2%), Millbrae (4.8%), and Menlo Park (3.7%). This residential distribution closely parallels that of the current Evening students population reported in the Evening Program Student Evaluation Summary Report of August, 1977.

Finally, a large proportion of respondents in each subsample year have gone on to further education beyond the sophomore level. Approximately half of the 1972 and 1974 subsamples, and nearly a third of the 1976 subsamples report some education at or above the junior level in college. As it is unlikely that the 1976 subsample respondents would have had time to go on to a four-year school at the time they returned their questionnaires, it is likely that the high proportion reporting further educational attainment include many Evening students who received that education in the past.

TABLE 5

BACKGROUND CHARACTERISTICS OF RESPONDENTS

(Reported separately by subsample year)

Background Characteristic	Proportion in each Subsample year		
	1972 (N=317)*	1974 (N=491)*	1976 (N=1,118)*
Age			
% over 25	51.4%	33.5%	53.8%
Average Age	27 years	26 years	31 years
Sex			
% Female	54.9%	54.0%	50.8%
Ethnicity			
% Minority	8.2	8.8	13.6
Units Earned			
% having completed 30 or more at time name was selected	71.0	49.1	40.5
Place of Residence			
% residing in Redwood City or San Mateo	32.3	27.5	31.8
% residing in Redwood City, San Mateo, South San Francisco, or Daly City	49.3	49.3	47.9
Educational Attainment			
% having gone on beyond sophomore level as of Spring, 1977	54.7	47.9	31.2

*These figures exclude those (N=75) who removed name from Questionnaire.

B. Enrollment Characteristics

Respondents show a remarkably consistent pattern of motivation for enrollment in occupation-related courses, as demonstrated by Table 6, "Selected Enrollment Characteristics of Respondents,": nearly three-fifths in each subsample year give a job-related purpose as a primary reason for enrollment. It is interesting to note that at least two-fifths in each year do not appear to enter occupational courses primarily as occupational preparation. Who these people are, what they want from the courses they pursue, and how satisfied they are with what they find are potentially important questions to pursue with some relevance for curriculum planning.

Noticeably high proportions of respondents in all three subsample years report completing an AA degree, a certificate, or both. As the questionnaire was primarily phrased to encourage response from completers, this result is not surprising. It suggests, however, that some caution should be exercised in interpreting data from non-completers, as it is unlikely that the full range of non-completers is not adequately represented in the responding sample. (It is already known, for example, that those who had completed few or no units by the semester of the subsample year were less likely to respond.)

Table 6 also shows the disproportionately high number of Evening students in the 1976 subsample, which was mentioned earlier in the report. This fact probably accounts for the lower percentage of students in the 1976 subsample making use of placement and career counseling services, or enrolled in the Co-op program. It will be helpful throughout this report to keep the percentages of

Evening student enrollment firmly in mind when interpreting other tables.

Finally, Table 6 shows in increasing proportion across the subsamples, that considerable numbers of respondents are presently enrolled in an educational institution: about a quarter of the 1972 subsample, half of the 1974 subsample, and three quarters of the 1976 subsample.

TABLE 6

ENROLLMENT CHARACTERISTICS OF RESPONDENTS

Enrollment Characteristic	Proportion in each Subsample		
	1972 (N=371)	1974 (N=491)	1976 (N=1,118)
Purpose for Enrollment in Occupational Courses			
% giving "job related"* as a primary reason	58.7%	57.2%	56.7%
Completion			
% having completed AA or Certificate as of Spring, 1977	83.9	72.7	41.7**
% Enrolled in Evening Courses Only	5.7	5.7	36.4
% Making use of Job Placement/ Career Counseling Services offered by SMCCCD	42.6	44.4	35.6
% Making use of any of the following services (career counseling, job placement, Learning Resource Center, tutoring, Library occup. references)	67.2	72.1	61.1
% Enrolled in Co-op Courses	26.8	25.5	19.1
% presently enrolled in an educational institution	29.0	50.5	71.8

* response included any of the following three: "to advance in my job," "to prepare for an occupation," "to retrain for a different job." Note that this question (q.3) allowed multiple responses.

** Somewhat inflated by those anticipating graduation in June, 1977.

C. Employment Characteristics

As seen in Table 7, "Employment Characteristics of Respondents," the vast majority of respondents in all three years report having either full- or part-time employment at the present time, in each case approximately seven-eighths. Whether this pattern is typical of the entire population who received questionnaires, is difficult to estimate with precision, although the Evening Program Evaluation Study reports a very similar percentage of employed people among its more than 2,000 respondents.

Close to half of the respondents in each year report employment in seven "professional/technical" or "clerical/secretarial" occupations (not shown in Table 7). As was the case with the Evening Program Evaluation Questionnaire, a seemingly large number of people didn't know how to respond to this item, as demonstrated by the proportion checking "other." Five categories of industry showed the largest proportions of respondent employment: manufacturing, finance/law/insurance/real estate, retail trade, communication/transportation/utilities, and health/medical.

Respondents appeared to report their monthly salary levels fairly freely: 91.5% responded to question 11. A noticeable proportion of the full-time employed indicate fairly low salary levels, below $9,600 a year: nearly half of the 1974 subsample, and a third of those in the other two subsamples. The median income range for full-time employed is $9,600-$12,000/year. This appears to be considerably below that reported for the current Evening student population (See Evening Program Evaluation Report, August, 1977); the measures are not exactly comparable. It may be of importance for future occupational program planning and counseling to pinpoint those programs where respondents indicate lowest and/or highest pay levels. Understandably, part-time employed respondents were all almost entirely below the $9,600/year level, with a median income range of $2,400-$4,800 per year.

TABLE 7

EMPLOYMENT CHARACTERISTICS OF RESPONDENTS

Employment Characteristics	Proportion* in each subsample year		
	1972 (N=371)*	1974 (N=491)*	1976 (N=1,118)*
Employment Status			
% full-time	82.0%	61.8%	60.6%
% part-time	8.3	23.1	26.2
(% full- or part-time)	(90.3)	(84.9)	(86.8)
Present Yearly Salary			
a. % of full-time employed making less than $9,600	34.1	48.0	36.1
b. % of part-time employed making less than $9,600	88.0	90.3	97.7
Relationship of College Training to Employment			
% "directly related"	55.3	50.9	44.5
% "somewhat related"	29.0	23.0	26.7
(% directly or somewhat related)	(84.3)	(73.9)	(71.2)
Difficulty Finding Employment Related to College Training			
% "very or somewhat difficult"	35.9	36.3	35.8
Increased Rank as a Result of College Training			
% "yes" of those indicating question did apply to them	56.6	46.7	36.8
Increased earnings as a result of College Training			
% "yes" of those indicating question applied to them	62.2	60.0	41.4

* The proportions in the table actually reflect percentages of those who responded to each item. The first three items had high response rates: Status (99.8%), Salary (91.5%), Relationship (97.6%). The last three items have much lower rates: Difficulty (53.0%), Rank (58.3%), Earnings (61.4%).

Approximately half of the respondents in each subsample year reported their college training as "directly related" to their employment. Predictably the proportion declines somewhat in the more recent subsamples, where current students maintain part-time jobs to cover the cost of living while at school. Although it is harder to interpret, an additional proportion of students in each year found their college training "somewhat related" to their employment.

These key facts concerning the relationship of college training to employment raise important issues. First, SMCCCD programs are on the whole just within the range currently being considered as a state requirement for vocational education funding (50% or more of graduates should find directly related employment). Second, the fact that large proportions of people find either a less direct relationship or none at all, combined with the fact reported earlier that two-fifths do not report enrolling for occupation-related reasons, may suggest that curricula be revised. Should the curricula be as occupation-specific as they are at present?

One should remember that individual programs vary somewhat in the extent to which employment opportunities exist which provide the possibility of a "direct" relationship. A number of business programs, for example, provide basic and rather generalized skills applicable to a wide range of jobs, which would tend to be considered "somewhat related." The measure of direct relationship will be further broken down by individual program in a later section (see Part Three, page 89-94).

The reader should also keep in mind the limitations of the measurement of relationship. The questionnaire only indicates the degree of relationship, as

perceived by the respondent. A spot check of responses against reported job titles, industries, and job areas indicates that the measure has validity for most respondents, yet there are still a number of cases where the reported degree of relationship is somewhat questionable.

A significant proportion, though less than half of the overall respondents group, indicated that it has been "very" or "somewhat" difficult to find a job related to their college training. Further probing reveals a few correlations between the difficulty of finding a related job and the type of occupational program. 64% of respondents in the Public Service cluster (Education, Recreation, Fire Science programs), and 70% of those in the Transportation cluster (Aeronautics programs) reported some or considerable difficulty finding employment related to training. On the other hand, only 13% of Cosmetology respondents reported any difficulty. Most programs fell in the middle, with one quarter to two-fifths of the respondents indicating some kind of difficulty finding related employment. A further check on the possible relationship between difficulty finding a related job and either use of counseling/placement services or the fact of program completion revealed no obvious correlation.

With questions concerning the effect of college training on increases in pay and/or rank, approximately two-fifths of respondents considered the question not to apply to them (perhaps due to the fact of unemployment, not finding a job related to training, not having completed a degree program yet, etc.). Of those who did find the question applying to them, about three-fifths (a small majority in the 1972 and 1974 subsamples) felt that earnings had increased as a result of training. A slimmer majority in 1972 and slightly less than half in 1974

felt that increases in rank had come about as a result of training. The data suggest a trend: the more years since college training, the more likely an increase in rank. Still, it should be clear from the data that increases in pay and rank are far from automatic. The 1976 subsample data on increases in pay and rank appears to be too high and is hard to interpret. Probably it reflects the responses of older Evening students who had some college education at an earlier time.

D. Evaluations and Recommendations Regarding SMCCCD Programs and Services

(1) Evaluative Ratings of Specific Program Features

Occupational participants were asked in the questionnaire to evaluate a number of aspects of the programs and services offered by SMCCCD, by indicating agreement or disagreement with statements such as, "the occupational program I completed satisfied my needs and interests" or, "there was sufficient adjustment in courses for individual differences in ability and interest." Evaluations were made on the following four-point scale:

1	2	3	4	(5)
strongly agree	agree	disagree	strongly disagree	(does not apply; no opinion)

In the following analysis, this scale has been treated as a continuous scale, with each item receiving an "average rating", i.e., 1.75 or 2.20, calculated by averaging the ratings of all those who did not check "does not apply; no opinion." Further analysis has been done by comparing the average ratings for each item given by various subgroups in the total responding sample, such as men or women, or those who completed a program vs. those who did not. A rating of 1.00 is taken to show strong positive evaluation of college programs and services in contrast to a rating of 4.00 indicating strong negative evaluation. A number

lower than 2.50 indicates agreement, although ratings between 2.25 and 2.50 show only marginal levels of agreement. Fifteen of the twenty-three evaluative statements in the questionnaire have general applicability to all occupational programs offered by the San Mateo colleges; they are also the statements to which enough people responded to provide a reasonably comprehensive picture of respondents' views. These 15 items are displayed in Table 8, "Average Evaluation Ratings of General Program Features." The other eight evaluative statements received too low a response, for the most part less than half of the respondents, to give a useful or meaningful impression of opinion among the total responding sample for each year. These later statements apply to more specific features of the SMCCCD offering, such as its Certificate or Co-op programs or its counseling services. These data will be presented and interpreted later in the report.

As can be seen from Table 8, the range of variation among average evaluation ratings is rather small. On the whole, respondents evaluate SMCCCD offerings positively. Only one item, "There was sufficient adjustment in courses for individual differences in ability and interest," received a marginally positive evaluation rating at 2.35 in the 1972 and 1974 subsample.

Of greater usefulness are the relative ratings of different aspects of the SMCCCD program. In order to make this more apparent, rank numbers have been given to the 15 average ratings in each subsample. The most positive average rating in each subsample year received rank number (1); the next most positive, rank number (2), and so on. From this point of view SMCCCD appears to do best in the respondents' opinion in the areas of providing appropriate facilities,

arranging convenient locations for courses and appropriate lengths of courses, and providing occupational programs which "satisfied respondents' needs and interests." On the other hand, respondents were clearly less in agreement that SMCCCD made sufficient adjustment in courses for individual abilities and interest, made counselors readily available, or made instruction sufficiently practical (especially in the 1972 and 1974 subsamples).

TABLE 8

AVERAGE EVALUATION RATINGS OF GENERAL PROGRAM FEATURES

Evaluative Item	Average Rating for each Subsample Year 1972 (N=317)*	1974 (N=491)*	1976 (N=1,118)*
Curricula			
Convenient location	1.75 (1)**	1.85 (1)**	1.80 (1)**
Satisfied my needs and interests	1.88 (3)	1.90 (2)	1.87 (2)
Appropriate length of courses	1.92 (4)	1.99 (5)	1.95 (4)
Core requirements fit well with program options	2.00 (8)	1.95 (4)	1.98 (5)
Convenient time schedule	1.95 (5)	2.02 (8)	1.99 (6)
Electives in area of interest available	2.06 (10)	2.00 (6)	1.99 (6)
Number of requirements not excessive	1.99 (7)	2.06 (10)	2.01 (7)
Goals and purposes of program were clear	1.97 (6)	2.10 (11)	2.09 (10)
Instruction			
Facilities appropriate to the subject	1.85 (2)	1.92 (3)	1.91 (3)
Course objectives clear	1.97 (6)	2.01 (7)	2.05 (9)
Constructive student evaluation	2.01 (9)	2.01 (7)	2.02 (8)
Instruction sufficiently practical	2.07 (11)	2.05 (9)	1.99 (6)
Quality above average	2.00 (8)	2.02 (8)	2.12 (11)
Sufficient adjustment for individual abilities, needs	2.35 (13)	2.35 (12)	2.25 (12)
Counseling and Guidance			
Counselors available during time attended	2.16 (12)	2.10 (11)	2.12 (11)

* Rating averages based on number somewhat less than subsample totals, depending on the response rate to each item.

** Number in parentheses indicates rank order position within each subsample year, i.e., (1) most positive rating; (2) next most positive rating, etc.

The aggregated average ratings for each of the three item categories, "curricula," "instruction," and "counseling and guidance"—show a clear relative difference, although small in absolute terms. Respondents showed significantly more agreement that curricula was appropriate and well arranged than that of counseling and guidance.

Item Category	1972	1974	1976
curricula	1.92	1.95	1.94
instruction	2.01	2.04	2.04
counseling and guidance	2.32	2.36	2.23

These relative rankings show remarkable consistency, regardless of the subsample year.

Attention should also be paid to several substantial shifts in the rank order of ratings between the three subsamples. In the 1976 group, there was considerably more agreement than in the 1974 group that instruction was sufficiently practical; by the same token, there was considerably less agreement that the quality of instruction was above average or that course objectives were clear and carried out. Comparing the first two subsamples, respondents appear to agree more that SMCCCD evaluation of students was constructive and that electives in the areas of interest were available. They seem less in agreement, however, that time schedules of courses were convenient and that goals and purposes of occupational programs were clear.

Interpretations based on these average evaluation ratings must be taken as strictly tentative. Because all statements are phrased in a positive direction,

there is a tendency for respondents to "give the college what it is looking for," i.e., respond positively. Also, the differences between average ratings for different items is typically quite small; the range of average ratings is never greater than .55 on the scale of 4.00. To give this range some meaning, a difference of .01 is equivalent to shifting an answer one point on the scale on the part of 3 people in 1972, 5 people in 1974, or 11 people in 1976! Finally, write-in comments on some questionnaires pointed out that people had some difficulty giving an item on instruction, for example, a rating where some of their instructors had been quite good, others less good; with the result that responses often reflect an "average" rating, which obscures meaningful variations.

(ii) Recommendations for Future Programming in SMCCCD

In addition to asking for evaluative ratings of past programs and services, the questionnaire asked for recommendations for the future. Respondents checked up to five out of fifteen possible recommendations. The 15 recommendations have been listed in Table 9, "Percentage of Respondents Checking each Recommendation," in the order from those which received the most response to the least. Note that the order is somewhat different for each subsample. The salient recommendations are remarkably consistent across the three subsamples, both in terms of the percentage of response and rank/order. Respondents encouraged the college to put more emphasis on courses in basic skills and courses in specific occupational techniques, more practical application in course instruction, more individualization of instruction and more emphasis on career counseling.

TABLE 9

PERCENTAGE OF RESPONDENTS CHECKING EACH RECOMMENDATION

Recommendation	Proportion in each subsample year 1972 (N=317)	1974 (N=491)	1976 (N=1,118)
a. Salient Recommendations			
1. more emphasis on courses in specific occupation techniques	50.8% (1)*	51.5% (1)*	48.4% (1)*
2. more practical application in course instruction	43.5 (2)	45.2 (2)	37.9 (2)
3. more emphasis on career counseling	42.9 (3)	42.4 (3)	29.7 (5)
4. more emphasis on courses in basic skills	30.2 (5)	33.2 (4)	33.5 (3)
5. more individualization of instruction	30.9 (4)	29.9 (5)	31.6 (4)
b. Less Prominent			
6. more job placement services	29.7 (6)	28.1 (6)	19.7 (10)
7. more counseling readjustment and study habits	23.7 (7)	23.4 (7)	17.1 (11)
8. more emphasis on courses in interpersonal relations	22.1 (9)	22.4 (8)	22.5 (8)
9. more use of Co-op Work Experience	23.3 (8)	16.3 (11)	11.6 (14)
10. shorter, more concentrated courses	14.2 (10)	20.0 (9)	23.2 (7)
11. more credit for previous work experience	12.6 (11.5)	18.3 (10)	23.3 (6)
c. Least Prominent			
12. more use of aptitude and occupational interest questionnaires	20.2 (9)	15.9 (13)	14.9 (13)
13. more use of credit by exam	12.6 (11.5)	16.1 (12)	15.8 (12)
14. more convenience in time and location of courses	9.1 (14)	12.8 (14)	19.8 (9)
15. more use of television or computer-assisted instruction	6.3 (15)	7.9 (15)	9.6 (15)

* rank/position within each subsample year.

Some differences are apparent from Table 9 among the three subsamples. Less recent occupational program participants (from the 1972 and 1974 subsamples) recommend more strongly the need for more practical application in instruction, more emphasis on career counseling and more job placement services--perhaps from longer exposure to the difficulties of the world of work. The most recent subsample from 1976 puts somewhat heavier emphasis on convenience in time and location of courses, and more credit for previous work experience. Perhaps the large contingent of older Evening students in the 1976 subsample accounts for some of this difference.

E. Respondents' Future Educational Plans and Preferences

A final set of questions was asked concerning respondents' future educational plans and preferences, particularly as they related to SMCCCD. A remarkably high 71.1% of all respondents indicated that they intended either in the next year or the foreseeable future to enroll in supplementary or continuing education courses at one of the three San Mateo colleges. This fact gives some weight and immediacy to the evaluations and recommendations already reported, to the extent that those opinions are truly representative of the total population of future users of SMCCCD.

Those planning to enroll in SMCCCD in the future were asked to say further what subject areas they planned to take courses in, and to indicate their preferences for course formats, times and locations. About a third of all respondents checked "academic or general education" and a third again "vocational supplementary." About a quarter marked "hobby or recreation" or "personal development" as the general area of future course work. (Note: these categories were not mutually exclusive--people could check as many as applied to them.)

Approximately half of the respondents wrote in (Question 29 on the Questionnaire) the specific areas in which they intended to pursue their studies. 30% of these responses were non-occupational (liberal arts, sports/physical fitness, arts and crafts). The remaining areas of occupation-related interest follow quite closely the proportions of respondents in each occupational cluster. Those individual program areas receiving the greatest interest as areas of future study included: General Business (101), Real Estate (95), Electronics (54), Accounting (46), Nursing (39), Art/the Arts (36), Management (33), Sports/Physical Fitness (32), and Data Processing (30). (Numbers in parentheses indicate actual number of respondents showing interest in each area.)

Respondents indicated a strong preference for a "lecture/discussion" format for classes—55% of all respondents checked this item, followed by 33% preferring "laboratory/demonstration classes" and 29% preferring "discussion groups/seminars/workshops." Few indicated preference for "independent study, such as through television."

Respondents tended to want morning and evening times for course meetings, as opposed to afternoon. They strongly preferred the week day over the weekend, and the college campus as a location for courses, as opposed to the community, place of employment, or public school.

F. Subgroup Differences in Evaluations and Recommendations

To appreciate more fully the significance of the evaluative ratings of programs and services, the study explored any differences in ratings given by various subgroups of the overall responding sample. For simplicity in analysis, subgroups were defined by dividing respondents into contrasting categories, with respect to the following characteristics:

Characteristic	Contrasting Categories	% of total Responding Sample*
Age	less than 25 years old (as of 1977)	51%
	25 or greater	49
Sex	male	48
	female	52
Ethnicity	white	84
	minority	16
Program Completion	completed AA or Certificate or both	59
	has not completed an AA or Certificate	41
Educational Attainment	sophomore or less	57
	greater than sophomore level	43

* Percents do not include those for whom no information was on record.

Subgroup comparisons were run on selected evaluation items, to make the task more manageable and to avoid redundancy. With little difference between evaluation items and a substantial correlation between responses on several different items, it seemed unnecessary to attempt an analysis of subgroup differences on all 15 of the items. Selection of items for analysis was made on three bases: (i) that they represent the range of average rankings from the highest to the lowest; (ii) that they represent salient concerns for most respondents, as indicated by the responses to the recommendations question; (iii) that they represent different aspects of SMCCCD programs and services, curricula, instruction, and counseling. The following six evaluative statements were selected; with the average rating for the entire responding sample shown for each item.

Overall Average Rating	Evaluative Statement
1.89	Occupational program satisfied my needs and interests
2.02	Instruction was sufficiently practical
2.08	Goals and purposes of the program were made clear to me on entry
2.09	Quality of instruction above average
2.13	Counselors readily available to me during time I attended classes
2.30	Sufficient adjustment in courses for individual differences in ability and interest.

Comparisons were made for each item between the average rating for both subgroups, and between either subgroup and the average rating for the District. Those differences which were statistically significant (See Appendix C for details of this analysis) were noted, and are described on the following page. All other

differences were too slight to consider.

On the whole, the different subgroups do not show a great deal of difference in the way they evaluate SMCCCD programs and services. The biggest difference between subgroup ratings, for example, was .30 on the 4-point scale, considerably less than the range of the 15 evaluation ratings which showed a discrepancy of .55 between the lowest and highest rating. Only in very few cases did either subgroup average differ significantly from the District average; instead, subgroups tended to fall on either side of the District average—one slightly above, and the other slightly below. The difference between the subgroups was, however, more often significant; these differences are summarized below. This finding parallels that of the Evening Program Evaluation Report, August, 1977.

(1) Subgroup Differences on Selected Evaluation Items

Men gave less positive evaluations than women in the 1974 and 1976 subsamples with regard to the degree to which their needs and interests were satisfied, and the degree to which program goals were made clear to them upon entry. But in one instance, in 1972, men were more likely than women to agree that sufficient adjustment had been made in courses for individual differences.

On almost all items, older respondents, those over 25, were more likely to evaluate SMCCCD favorably. This pattern was particularly apparent for the 1976 subsample, but less so for the 1972 and 1974 subsamples. Conceivably the large number of older Evening students in the 1976 subsample are on the whole more satisfied with the occupational offerings than the younger day students.

With regard to minority respondents contrasted with white respondents, the following patterns emerged: minority people from the 1972 subsample rated more positively than average their degree of satisfaction with the occupational programs, the quality of instruction, and the availability of counselors. In other subsample years, minority respondents show little noticeable difference from District averages, except the lower-than-average rating given availability of counselors by the 1976 subsample.

Substantial differences occurred between the evaluation ratings of those who completed occupational programs and those who did not, especially in the 1972 and 1974 subsamples. Regarding the satisfaction of needs and interest, the clarity of program goals upon entry, and the quality of instruction, non-completers gave significantly lower evaluations to SMCCCD than those who had completed an occupational program. This difference is understandable; those who were less pleased with what SMCCCD offered them would be less likely to finish.

Non-completers are a distinctly minority group in the 1972 and 1974 subsamples (16% and 27%, respectively), but conceivably they have important criticisms to make which should be heard. It is also possible that many of the non-completers in the total population receiving questionnaires declined to respond. A look at completion rates among the random follow-up sample of non-respondents suggests that there is a slight tendency in this direction; but the poor return on the telephone follow-up makes the data somewhat inconclusive.

Where differences appear regarding the educational attainment of respondents, those who have achieved education beyond the sophomore level tended to rate SMCCCD programs and services less favorably. This pattern was particularly evident in 1972 regarding the clarity of program goals, degree of practical application of courses, and the degree of adjustment in courses for individual differences, and to a lesser extent in 1974. (Note that in 1976, the direction of the relationship is reversed.)

The implications of this finding are not obvious, and raise interesting questions. Do those who go from an occupational program to some form of further education see the occupational program in retrospect as less satisfactory than those who go from the program into relevant employment? For certain occupational programs, which intend to provide a springboard either to relevant employor to relevant continued education, it would be useful to pursue this question in greater depth.

The most prominent subgroup differences are summarized on the next page, along with the subsample year in which the difference was found.

Most Noticeable Differences	Years to Which it Applies
a. men's ratings lower than women's	1974, 1976 groups
b. those over 25 higher ratings than younger	all subsamples, especially 1976
c. completers' ratings higher than non-completers'	especially the 1972, 1974 groups
d. those with education beyond sophomore level gave lower ratings	especially 1972, less so for 1974
e. minority respondents gave higher ratings	especially 1972 subsample

(ii) Subgroup Differences in Selected Recommendations

Differences in the proportion of each subgroup making selected recommendations were also examined. The five most prominent recommendations, each checked by more than 30% of the total responding sample, were considered, as well as the general question concerning recommendation of SMCCCD occupational programs to one who was "seeking to enter or advance in your occupation." Where the percentage of a given subgroup checking each recommendation appeared significantly higher (or lower) than the percentage of that subgroup in the overall responding population, the difference was noted and described below.

As with the comparisons of average evaluation ratings, the majority of comparisons showed little noticeable difference between subgroups. Several contrasts did stand out, however. Younger respondents tended to advocate "individualization of instruction" more than older respondents, and also put more emphasis on career counseling. Men were, on the whole, less likely to advocate individualization. Those completing degrees were more likely to push for practical application in course instruction and more emphasis on career counseling than those who had not completed degrees. Of all pairs of subgroups, only the completers showed a disproportionately high tendency to give a general recommendation for SMCCCD occupational programs to "those interested in entering or advancing in the field." Those with education beyond the sophomore level did not favor any recommendations more or less prominently than those with education at or less than the sophomore level.

The significant differences are summarized below:

	Recommendation	Subgroup Disproportionately Favoring the Recommendation
a.	more individualization of instruction	younger, female
b.	more practical application in course instruction	completers
c.	more emphasis on career counseling	younger, completers
d.	general recommendation of SMCCCD occupational education programs	completers

Note: In this analysis all three subsample years were merged together.

Summary: The Extent to which Various Subgroups Among the Respondents Evaluate SMCCCD programs and Services Differently

In general, the various subgroups within the responding sample showed little difference in the way they evaluated SMCCCD offerings, or in the way they made recommendations. Older respondents' rating appear somewhat higher, especially in 1976, and were less likely to push for individualization of instruction or for an emphasis on career counseling. Those who completed occupational programs tended to evaluate SMCCCD more positively, gave its AA and Certificate programs a positive general recommendation in greater numbers, yet also urged more practical application in course instruction. Women, who asked more noticeably for individualization of instruction, tended to rate evaluative items higher than men, especially in the early subsample years. Minority respondents differed from white students evaluation only in the 1972 subsample year, where they tended to give higher ratings. Those with education beyond the sophomore level tended to give lower evaluation ratings to certain items, especially in the earliest subsample year; however, this group stressed no particular recommendations particularly strongly.

Note: The preceding analysis has been done at the District level within each subsample year. The fact that few obvious subgroup differences appeared at that level does not mean that within a specific occupational cluster or program there are few important subgroup differences.

G. Further Exploration of Subgroup Differences

Two subgroups were seen to be especially important in the analysis of the data; and, consequently, a search was made for further subgroup differences.

(i) Differences between Completers and Non-completers

Respondents in each subsample year included both completers and non-completers. Although the perspective of each group gives valuable information on the conduct of occupational programs, the two perspectives may differ considerably. This is especially true when students leave a program before completion because they feel it is not preparing them well for that occupation. (There are, of course, many other reasons why students leave programs early.) To be most fair to each program evaluated, special attention should be paid to those who did "see it through." Although not the only criterion for assessing a program, the views of such people should be considered as a distinct entity.

In the previous section, differences in the average evaluation ratings of completers as compared with non-completers were noted (see page 57), as well as differences in average recommendations. It was shown that completers, especially in the earlier subsample years, tended to have more favorable impressions of curricular and instructional quality than did non-completers. Completers, more often than non-completers, also tended to check recommendations regarding career counseling and practical applications in course instruction.

Table 10

COMPARISON BETWEEN COMPLETERS AND NON-COMPLETERS
ON SELECTED CHARACTERISTICS

Characteristics	Subsample years					
	1972		1974		1976	
	Comp. (N=266)	Non-comp. (N=51)	Comp. (N=357)	Non-comp. (N=134)	Comp. (N=466)	Non-comp. (N=652)
% Employed...						
...full-time	79.7%	68.6%	59.1%	51.4%	52.6%	58.3%
...part-time	7.9	7.8	21.0	21.6	22.1	26.8
Median Income Range (average annual income)	$9,600-12,000	$7,200-9,600	$9,600-12,000	$7,200-9,600	$9,600-12,000	$7,200 9,600
Relationship of College Training to Employment						
% direct relationship	58.3%	33.3%	56.3%	29.9%	50.9%	37.3%
% somewhat related	26.3	39.2	19.0	26.1	21.7	27.9
Difficulty Finding Jobs Related to Training						
very difficult or somewhat difficult	35.2*	40.9*	35.2*	40.9*	—**	—**
Increased Rank as a Result of College Training						
% yes (of those who indicated question applied to them)	66.4*	39.4*	66.4*	39.4*	—**	—**
Increased Pay as a Result of College Training						
% yes (of those who indicated question applied to them)	60.2*	41.3*	60.2*	41.3*	—**	—**

* here analysis was done by merging "past students" into a common pool
** analysis was not performed for the 1976 subsample, as it was felt that effects of program completion would be less meaningful here.

Table 11

COMPARISON BETWEEN DAY AND EVENING STUDENTS IN THE 1976 SUBSAMPLE

	Day Division respondents n=564*	Evening Division respondents n=407*
Average Age	27 years	38 years
% Completing a Program	48.9%	27.0%
% Gone Beyond Sophomore Year in their education	26.8	50.2
% Full-Time Employed	60	85
Median Income Range (yearly income)	$9,600-$12,000	$12,000-$14,400
(for completers only)	($7,200-$9,600)	($14,400-$16,800)
Job-related Reasons for Enrolling: % Checking...		
... for job advancement	13.8%	43.0%
... for preparation for a job	61.9	19.4
... for job retraining	9.8	17.0
Average Evaluation Ratings		
satisfied needs, interests	1.92	1.82
program goals clear	2.12	2.05
instructional quality above average	2.08	2.18
instruction sufficiently practical	2.01	1.97
adjustment for ind. differences in ability, interests	2.27	2.23
counselors available	2.03	2.24

* Analysis based on 83% response to Day-Evening item, (question 3 of questionnaire).

A look at some selected background, enrollment, and employment characteristics helps to further clarify the nature of the differences between the subgroups. As Table 10, "Comparison Between Completers and Non-Completers on Selected Characteristics," demonstrates, completers are employed at about the same rate as non-completers, but their income range tends to be somewhat higher. Understandably, a considerably larger proportion of the completers in each subsample year report a direct relationship between college training and subsequent employment. It is also interesting to note that a considerably larger proportion of respondents from past subsample years indicate that increases in pay or rank have resulted from their college training--at least, they perceive that to be the case. However, completers do not appear to have found it noticeably easier to find related employment than have non-completers.

(ii) Differences between Day and Evening Students in the 1976 Subsample

As previously explained, the 1976 subsample unavoidably contained a large proportion of Evening students--approximately 40%. The following breakdown of Day and Evening students in the 1976 subsample on selected characteristics points out a number of important differences between these two subgroups.

From Table 11, "Comparison between Day and Evening Students in the 1976 Subsample," it is apparent that the Evening Division respondents, besides being considerably older and better educated, are more motivated to participate in occupational programs for job advancement than are the majority of Day students. Only a quarter of the Evening Division respondents, as compared with half of the Day students, were completers by the time they filled in the questionnaire,

suggesting that many of them are enrolled part time. Evening Division respondents are somewhat more likely to have full-time employment. Of those within each subgroup who are full-time employed, Evening Division respondents indicate higher levels of income on the whole, especially those who have completed programs.

Average evaluation ratings of the two subgroups do not differ tremendously. The only noticeable difference occurs regarding the availability of counselors--there, the Evening Division rating is noticeably lower than the Day Division. This lower rating is simply explained: Counseling Services simply have not been provided for Evening students as much as they have for Day students. But, it should be kept in mind that the ratings for <u>both</u> subgroups on this item as well as for the other items are comfortably within the positive range (i.e., higher than 2.30).

PART THREE: PROGRAM LEVEL DATA

This section attempts to carry the analysis of the preceding section one step farther by breaking down the responding subsamples by occupational cluster and by their component program. Here the primary questions being addressed are: Are certain occupational clusters, or specific programs, receiving noticeably high or low evaluation ratings? Do students from these clusters or programs emphasize certain recommendations over others?

A second topic for this section involves a comparison of clusters and programs in terms of their rates of completion, and the extent to which participants have found a direct relationship between their college training and employment.

In this section we will also look closely at the Counseling and Job Placement services and the Cooperative Work Experience Education option, which students in any occupational program might make use of. Analysis of the items specifically referring to and evaluating these two program offerings will be done.

Before making comparisons between specific occupational clusters, it is well to be aware of the actual numbers of people who responded from each occupational cluster within each subsample year. Where the number of responses are too few--for the purposes of this study, less than 10--it is unlikely that the responses are reliable, in that judgments about entire programs might be based on only a few individuals' views. The following analyses will consequently concentrate on those instances in which there was a sufficient response. Table summarizes the numbers of respondents in each occupational cluster for each year.

TABLE 12

NUMBER OF RESPONDENTS IN EACH OCCUPATIONAL CLUSTER

(reported separately for each subsample)

Occupational Cluster	1972	1974	1976	Total
1. Agribusiness and Natural Resources	(2)***	(8)	19	29
2. Environment	(0)	(1)	(2)	3
3. Transportation	20	30	45	95
4. Consumer/Homemaking	13	10	16	39
5. Communications/Media	15	35	47	97
6. Health	50	78	46*	174
7. Manufacturing	30	42	69	141
8. Personal Service	(5)	11	31	47
9. Recreation/Hospitality	11	(6)	50	67
10. Business	125	162	561	848
11. Marketing and Distributing	(4)	(9)	26	39
12. Public Service	(8)	27	82	117
13. Major Undeclared**	23	44	59	126
14. (Non Occupational Miscellaneous)**	(11)	(28)	(65)	104
Totals:	317	491	1,118	1,926 Respondents

* Due to an oversight the two-year RN Program in 1976 was not surveyed, hence this number is abnormally small.

** The last two categories have been added because a number of respondents, although officially listed as declared occupational majors at the time their name came up for the study, reported themselves as either "undeclared" or as some transfer major on the questionnaire.

*** Where response numbers are too small for reliable information, response frequencies have been put in parentheses.

Using the same six evaluative statements as in the analysis of subgroup differences in the preceding section of this report, variations were detected in the reactions of respondents within specific occupational programs and clusters to the SMCCCD offerings. Those clusters or programs with ratings on each item noticeably above or below the District average will be examined more carefully, as either exemplary or in need of some attention and improvement. A statistical criterion has been used to determine which differences are significant (the confidence interval of means, at the .05 level); it is explained in detail in Appendix C.

Note that the same cautions should be exercised here in interpreting differences between average ratings as were mentioned in the previous section (Part Two, Section D, page 45). The data presented here should be more a source of questions to be raised and pursued in greater depth, than a basis for firm conclusions upon which important decisions are based. One additional caution is important to keep in mind: those clusters or programs indicated as "higher" or "lower" are not necessarily very high, or very low, in any absolute sense, but rather higher or lower than most other programs in the District during that given year. Where specific programs are given particularly high or low ratings in a more absolute sense, special mention will be made of that fact; in those cases a program is probably performing exceptionally well in the respondent's view, or is very much in need of improvement.

The results of the "high-low" comparisons are reported on the following page on a cluster-by-cluster basis. To avoid deluging the reader with numbers, a simplified tabular presentation has been employed using the following symbols:

+: average rating is significantly higher than District average

++: average rating is exceptionally high, in a more absolute sense

-: average rating is significantly lower than the District average

--: average rating is exceptionally low, either very near the midpoint of the rating scale, or else in the negative range

Where the difference between an average rating and the District average is not significant, the space in the table is left blank. Where a given evaluative statement received no significantly different ratings in any subsample year, it has been omitted from the table. No table is given in the event a "cluster" consists of only one program. Also, significant differences are only reported where a given program has sufficient respondents—arbitrarily 10—to insure a reasonably reliable indication of opinion.

Response rates for the component programs of each cluster are also given as an additional indicator of the reliability of the response. The response rates show what proportion of those in the program who received questionnaires actually returned them. Where the numbers of responses are too few to be considered useful, the response rate has been bracketed. Also, where the numbers in the total population receiving questionnaires was very small to begin with—for the purposes of this study, less than 20—the response rate has been omitted.

	Response Rates:		
1. Agribusiness and Natural Resources Cluster	1972	1974	1976
Horticulture	(4.9%)	(16.4%)	19.3%
Landscaping	—	—	—

Only the response from the 1976 subsample is large enough to be considered reliable. In that year, respondents indicated higher than average ratings of

the quality of instruction, yet lower than average ratings of the degree to which occupational program satisfied respondents' needs and interests.

2. Environment Cluster	Response Rates: 1972	1974	1976
Environmental Technology	—	—	—

In no subsample were there enough respondents to form a reliable judgment of this program. Indeed, the number of people in the total population receiving questionnaires was very small (N = 4) for this cluster, leaving one with some doubt as to its legitimacy as a distinct, coherent "cluster" or "program" in its own right.

3. Transportation Cluster	Response Rates: 1972	1974	1976
Aeronautics - Flight Training	(2.6%)	18.3%	12.8%
Aeronautics - Mechanics	7.5%	(7.5%)	12.0%

The 1972 subsample rated this cluster noticeably high with regard to respondents' satisfaction of needs and interest, quality of teaching, and the degree to which courses adjusted for individual differences. On the other hand, the 1972 subsample gave a lower-than-average rating to the clarity of program goals in this area, and this pattern was repeated in the 1974 subsample. The availability of counselors also received a lower than average rating from respondents in the 1974 subsample. The respondents in the 1976 subsample felt just the opposite apparently; they rated clarity of goals and availability of counselors more positively than average.

Several of these noticeable differences were clearly associated with individual programs, as can be seen in Table 13a below.

TABLE 13a

SIGNIFICANTLY HIGH OR LOW RATINGS* FOR TRANSPORTATION CLUSTER PROGRAMS

\+ = higher than District average
++ = exceptionally high
\- = lower than average
— = exceptionally low (near midpoint or negative)

Program/Selected Items	Significant Differences for Each Subsample Year 1972	1974	1976
Aeronautics - Flight	(N=0)	N=22	N=24
program goals clear		—	
Aeronautics - Mechanics	N=20	(N=8)	N=21
satisfied needs, interests	+		
sufficient adjustment for individualized differences	++		
counselors available			+

*Criterion of significance: District average falls outside a confidence interval of means, at .05 level, set up around program average. See Appendix C for details.

The Aeronautics-Mechanics program departed noticeably from District averages in a positive direction regarding several features of program functioning. The Flight program only once departed from District average ratings, for the 1974 subsample regarding clarity of program goals.

4. Consumer and Homemaking Cluster

	Response Rates: 1972	1974	1976
Home Economics programs	10.1%	15.8%	13.3%

A lower-than-average rating appeared with the 1972 respondents with respect to the clarity of program goals. The 1974 respondents appeared to feel that individual differences were well accommodated in courses, yet rated the program lower than average regarding the degree to which respondents' individual needs and interests were met. The 1976 subsample expressed higher-than-average agreement with statements concerning the quality of instruction in courses, but showed less agreement about the availability of counselors.

	Response Rates:		
5. Communications and Media Cluster	1972	1974	1976
Drafting	(10.3%)	13.1%	10.9%
Technical Illustration/Graphics	(0%)	(14.3%)	(7.4%)
Telecommunications	(9.4%)	10.8%	11.4%

Where this cluster differed noticeably from District averages, it showed only higher-than-average ratings. The 1974 respondents evaluated more positively than average the clarity of program goals, and the programs' capacity to accommodate individual differences. The 1976 subsample rated more highly than usual the capacity of the cluster of programs to satisfy respondents' needs and interests, as well as the quality and practicality of instruction.

Breaking down this cluster by individual program, as seen in Table 13b on the following page, reveals a consistent pattern of more-positive-than-average ratings in the 1974 and 1976 subsample years for the Drafting and Telecommunications programs.

TABLE 13b

SIGNIFICANTLY HIGH OR LOW RATINGS* FOR THE COMMUNICATIONS AND MEDIA CLUSTER PROGRAMS

+ = higher than District average
++ = exceptionally high
- = lower than average
-- = exceptionally low (near midpoint or negative)

Program/Selected Items	Significant Differences for Each Subsample Year 1972	1974	1976
Drafting	(N=9)	N=14	N=17
satisfied needs, interests		+	+
program goals clear		++	++
quality of instruction above average		+	+
instruction sufficiently practical		+	+
adjustment for individual differences			--
counselors readily available		++	+
Technical Illustration	(N=0)	(N=7)	(N=4)
insufficient response for reliable comparisons			
Telecommunications	(N=6)	N=14	N=26
program goals clear		+	
quality of instruction above average			+
instruction sufficiently practical		+	+
adjustment for individual differences		++	
counselors readily available		--	-

*Criterion of significance: District averages fall outside a confidence interval of means, at .05 level, set up around program average. See Appendix C for details.

Only the availability of counselors for the Telecommunications program and the adjustment for individual differences in Drafting courses as seen by the 1976

subsample respondents appeared as potential problem areas. The response for the Technical Illustration area was generally too small to allow for confident comparisons.

6. Health Occupations Cluster	Response Rate: 1972	1974	1976
Respiratory Therapy	(0%)	13.3%	14.4%
X-ray Technology	(15.0%)	(14.9%)	(4.5%)
Nursing	13.1%	14.3%	17.2%
Gerontology	(0%)	(21.7%)	(20.8%)

This cluster was more noted for its lower-than-usual ratings. Only the cluster's capacity to satisfy respondents' needs and interests in the 1972 subsample and the clarity of its goals as viewed by 1972 and 1974 respondents received higher-than-average ratings. Lower-than-average ratings were given for statements regarding instruction in all three subsample years: the adjustment for individual differences across all three years, the quality of teaching in 1974 and 1976, and the practicality of instruction for the 1974 subsample. In two cases, the average ratings given the health occupations were especially low: adjustment for individual differences in 1972 (2.91), and the quality of instruction in 1976 (2.41). Finally, the availability of counselors received lower-than-average ratings from Health Occupations respondents in 1976.

A breakdown of the cluster by individual programs, presented in Table 13c on the following page, helps to pinpoint the sources of the low ratings.

TABLE 13c

SIGNIFICANTLY HIGH OR LOW RATINGS* FOR THE
HEALTH OCCUPATIONS CLUSTER PROGRAMS

\+ = higher than District average
++ = exceptionally high
\- = lower than average
-- = exceptionally low (near midpoint or below)

Program/selected items	Significant Differences for Each Subsample Year		
	1972	1974	1976
Respiratory Therapy	(N=0)	N=11	N=13
satisfied needs, interests			
program goals clear		+	+
instructional quality above average		—	—
instruction sufficiently practical		-	
adjustment for individual differences			
counselors available		+	-
X-Ray Technology	(N=4)	(N=7)	(N=2)
Nursing**	N=45	N=57	N=22**
satisfied needs, interest	+		-
program goals clear	+	+	
instructional quality above average			—
instruction sufficiently practical			
adjustment for individual differences	—	—	—
counselors available			-
Gerontology	(N=1)	(N=3)	(N=9)

* Criterion of significance: District average falls outside a confidence interval of means, at the .05 level, set up around program average. See Appendix C

** The 1976 subsample does not include any participants in the two-year RN program due to an oversight in the sample selection.

Clearly, both the Respiratory Therapy and the Nursing programs in 1976 have received a number of lower-than-usual ratings, which suggests that either some significant problem may exist at the present time or that some subgroup within the respondents have had a less than successful experience so far in their occupational program. Further inspection of the table reveals that in both programs, goals seem fairly clear, and needs and interests fairly well satisfied; but for Respiratory Therapy, the clarity of program goals seems to have been a special weak point—at least as far as these respondents are concerned. For the Nursing program, the lack of adjustment for individual differences—whatever that really means—appears to have been a particular problem in all three subsample years, and in 1976, the quality of instruction as well.

Note that neither the X-ray Technology nor the Gerontology program received sufficient responses in any single subsample year for fair comparisons to be made.

	Response Rates:		
7. Manufacturing Cluster	1972	1974	1976
Electronics	10.9%	18.3%	13.7%
Machine Tool Technology	(4.9%)	(20.0%)	(13.4%)
Welding Technology	(25.5%)	(11.8%)	(6.8%)

On the whole, responses from this cluster remained close to District averages, with one exception: 1972 subsample respondents were less in agreement than District average that the occupational program they had enrolled in had satisfied their needs and interests.

The breakdown by program in Table 13d shows that only enough responses were received from Electronics program participants to speak reliably about that

program. Again, it showed divergent ratings in only a few cases: the 1972 and 1974 respondents felt their needs and interests had been less well met than the District average; 1976 respondents indicated noticeably high agreement that instruction was sufficiently practical.

TABLE 134

SIGNIFICANTLY HIGH AND LOW RATINGS* FOR MANUFACTURING CLUSTER PROGRAMS

\+ = higher than District average
++ = exceptionally high
\- = lower than average
— = exceptionally low (near midpoint or negative)

Program/Selected Items	Significant Differences for Each Subsample Year 1972	1974	1976
Electronics	N=20	N=29	N=56
satisfied needs, interests	-	-	
instruction sufficiently practical			+
Machine Tool Technology	(N=2)	(N=9)	(N=9)
Welding Technology	(N=8)	(N=4)	(N=4)

*Criterion of significance: District average falls outside a confidence interval of means, at the .05 level, set up around the program average. See Appendix C for details.

8. Personal Service Cluster	Response Rates: 1972	1974	1976
Cosmetology program	(8.9%)	10.4%	10.1%

Particularly from the 1974 subsample respondents, this cluster group received a number of higher-than-average evaluation ratings regarding all items except

adjustment for individual differences. The 1976 subsample expressed its more-positive-than-usual rating for the clarity of program goals, but tempered it with lower-than-average ratings of the availability of counselors and the adjustment of courses to individual differences.

	Response Rates:		
9. Recreational and Hospitality Cluster	1972	1974	1976
Food Service/Technology	(3.0%)	(9.1%)	12.6%
Travel/Tourism	-	-	15.3%

This cluster was particularly highly evaluated. No lower-than-usual ratings were noted. The 1972 and 1974 subsamples yield little response in this cluster, due in part to the absence of the Travel/Tourism program during those two years. The 1976 subsample gave glowing evaluations of five of the six evaluative items considered.

As can be seen in Table 13e on the following page, the more-positive-than-average ratings were distributed relatively equally among the two programs.

TABLE 13e

SIGNIFICANTLY HIGH OR LOW RATINGS* FOR THE
RECREATION AND HOSPITALITY CLUSTER PROGRAMS

\+ = higher than District average
++ = exceptionally high
\- = lower than average
— = exceptionally low (near midpoint or negative)

Program/Selected Items	Significant Differences for Each Subsample Year 1972	1974	1976
Food Service Technology	(N=2)	(N=5)	N=12
program goals clear			+
quality of instruction above average			+
instruction sufficiently practical			+
adjustment for individual differences			+
Travel/Tourism	(N=9)	(N=1)	N= 38
satisfied needs, interests			+
program goals clear			++
instruction sufficiently practical			+

*Criterion of significance: District average falls outside a confidence interval of means, at the .05 level, set up around the program average. See Appendix C.

10. Business Cluster	Response Rates: 1972	1974	1976
Dental Assisting	15.6%	—	13.7%
Medical Assisting	(11.3%)	15.5%	(8.6%)
Transportation	—	(14.3%)	(15.0%)
Accounting	24.3%	31.8%	11.5%
Banking and Finance	—	—	—
Clerical/Secretarial	11.5%	11.6%	14.3%
Legal Secretarial	—	(6.9%)	(7.6%)
Administration	7.0%	12.1%	13.6%
Management	—	33.3%	18.2%
Real Estate	0	(9.7%)	20.6%
Data Processing	14.9%	13.9%	16.2%

This extremely large cluster, encompassing 11 programs and nearly half of the overall responding sample, showed no tendency to evaluate aspects of the SMCCCD programs and services significantly above or below the District average for each year. This is most probably due to the cancellation effect of combining a large number of respondents and different programs into one category. Subdividing the cluster into its component programs reveals some noticeable differences between them, as presented in Table 13f on the following page.

Clearly, the Secretarial/Clerical program receives consistently higher-than-average ratings on almost all items from respondents across several years. The Dental Assisting program similarly receives positive ratings, at least as far as the quality of instruction and clarity of goals of the program from the point of view of the 1972 subsample. Programs such as the Accounting program seem to generate mixed reactions especially in the 1974 subsample, where half of the items received higher-than-average ratings, others lower-than-average. The Medical Assisting program shows a somewhat similar pattern for that year.

The Administration and Management programs received lower-than-usual ratings regarding a few aspects of their functioning. The Data Processing program respondents, however, in all three years and across all items, showed a consistent pattern of exceptionally low ratings. In a number of instances, these ratings are well <u>below</u> the midpoint on the 4-point evaluative scale; in other word, conveying a somewhat negative average judgment on the part of Data Processing respondents. A further exploration into the reasons for this pattern would seem especially appropriate in the case of this program.

TABLE 13f

SIGNIFICANTLY HIGH OR LOW RATINGS*
IN BUSINESS CLUSTER PROGRAMS

\+ = Higher than District average
++ = exceptionally high
\- = lower than average
— = exceptionally low, near or below midpoint

Program/selected items	Significant Differences for Each Subsample Year		
	1972	1974	1976
Dental Assisting	N=17	(N=1)	N=10
program goals clear	++		
quality of course instrucion above average	++		
Medical Assisting	(N=6)	N=11	(N=9)
satisfied needs, interest:		-	
instruction sufficiently practical		-	
adjustment for individual differences		—	
counselors available		++	
Transportation	(N=1)	(N=2)	(N=9)
Accounting	N=10	N=21	N=60
satisfied needs, interests		-	
program goals clear		-	—
quality of instruction above average		++	
instruction sufficiently practical		-	
adjustment for individual differences		++	
counselors available		+	-
Banking and Finance	(N=2)	(N=1)	(N=5)
Secretarial/Clerical	N=33	N=24	N=66
satisfied needs, interests		-	++
program goals clear		++	++
quality of instruction above average			+
adjustment for individual differences			+
counselors available			+
Administration	N=38	N=64	N=184
program goals clear	-	-	-
adjustment for individual differences		—	

Table 13f (Continued)

Program/selected items	Significant Differences for Each Subsample Year		
	1972	1974	1976
Legal Secretarial	(N=6)	(N=5)	(N=8)
response insufficient for reliable comparison			
Management	(N=1)	N=13	N=57
satisfied needs, interests		-	
program goals clear			-
quality of instruction above average			-
Real Estate	(N=0)	(N=4)	N=117
counselors available			+
Data Processing	N=11	N=16	N=36
satisfied needs, interests	-		-
program goals clear		-	—
quality of instruction above average	-	—	—
instruction sufficiently practical	—		—
adjustment for individual differences		+	—
counselors available	—		—

* Criterion of significance: District average falls outside of confidence interval of means, at the .05 level, set around the program average. See Appendix C.

11. Marketing and Distributing Cluster	Response Rates: 1972	1974	1976
Merchandising	(9.3%)	(13.2%)	(12.5%)
Interior Decoration	--	(6.5%)	11.2

Only in the 1976 subsample were there sufficient respondents to give a reliable estimate of differences. People in that year tended to rate the cluster's programs highly in the area of adjustment for individual differences, but less than average for the degree to which people felt their own needs and interests had been satisfied.

At the individual program level, reliable information exists only for the Interior Decoration program in the 1976 subsample year. There, as can be seen in Table 13g below, the ratings were close to District averages for all program features except the satisfaction of needs and interests.

TABLE 13g.

SIGNIFICANTLY HIGH OR LOW RATINGS* FOR THE MARKETING AND DISTRIBUTING CLUSTER PROGRAMS

\+ = higher than District average
++ = exceptionally high
\- = lower than average
-- = exceptionally low (near midpoint or negative)

Program/Selected Items	Significant Differences for Each Subsample Year		
	1972	1974	1976
Merchandising	(N=4)	(N=5)	(N=7)
Interior Decoration	(N=0)	(N=4)	N=19
satisfied needs, interests			--

*Criterion of significance: District average falls outside a confidence interval of means, at the .05 level, set up around program average. See Appendix C.

12. Public Service Cluster	Response Rates: 1972	1974	1976
Early Childhood Education	(10.3%)	(11.0%)	13.2%
Educational Assistant	—	—	—
Fire Science	—	(8.7%)	17.6%
Recreational Leadership	--	(17.5%)	—

In the 1974 and 1976 subsamples, where sufficient responses were received to enable reliable analysis, the cluster appeared for the most part to be given ratings

by respondents which coincided closely with District averages. An exception to this was the 1974 group, which gave the cluster higher-than-average ratings regarding the practicality of instruction and its capacity to accommodate individual differences.

Table 13h below reveals noteworthy differences between individual programs in this cluster.

TABLE 13h

SIGNIFICANTLY HIGH OR LOW RATINGS* FOR THE PUBLIC SERVICE CLUSTER PROGRAMS

+ = higher than District average
++ = exceptionally high
- = lower than average
— = exceptionally low (near midpoint or negative)

Program/Selected Items	Significant Differences for Each Subsample Year 1972	1974	1976
Early Childhood Education	(N=6)	(N= 9)	N= 28
satisfied needs, interests			+
adjustment for individual differences			+
Educational Assistant	(N=0)	(N=4)	(N=5)
Fire Science	(N=2)	(N=7)	N=44
satisfied needs, interests			-
program goals clear			-
quality of instruction above average			—
instruction sufficiently practical			-
adjustment for individual differences			-
counselors available			—
Recreation Leadership Assisting	(N=0)	(N=7)	(N=5)

*Criterion of significance: District average rating falls outside a confidence interval of means, at the .05 level, set around program average. See Appendix C.

The analysis summarized in Table 13h affords a close look at two programs. What had appeared at the cluster level to be a slightly more-positive-than-usual overall pattern of response turns out to contain some substantial differences. Clearly the Fire Science Program receives consistently lower-than-average ratings on all items considered; in two cases its ratings are especially low: the quality of instruction and availability of counselors for the 1976 subsample year. The Early Childhood Education program shows a somewhat more-positive-than-usual pattern, although not exceptionally so. Note that individual program differences can only be isolated reliably in the 1976 subsample.

13. Undeclared Majors

Proportion of Response in Each Subsample Year		
1972	1974	1976
3.5%	5.7%	5.8%

This group includes all those who chose not to identify themselves with an occupational major when returning the questionnaire. Their reasons for so doing are undoubtedly varied. To check on the possibility that such people were systematically more or less positive than average about SMCCCD programs and services, the average ratings for each subsample year were looked at. The group showed no noticeable differences from District averages.

Looking back over this summary of differences in evaluative ratings by cluster group, it is evident that for most clusters certain aspects of the program are more highly regarded than others. Most clusters receive ratings both on the high side of the District average and on the low side. It is also clear that respondents from the different subsample years have different and sometimes contradictory views of the same program.

Three clusters received only higher-than-average ratings where ratings departed from District averages: Communications and Media, Public Service, Recreation and Hospitality. One cluster seemed to receive a disproportionate share of lower-than-average ratings, including several seriously low ratings--the Health Occupations group. A third cluster, Business, due to its size and heterogeneity, received no ratings differing from District averages.

Pursuing the analysis to the level of individual programs, certain programs stood out as consistently well-rated or less-well-rated by respondents. The Drafting, Telecommunications, and Clerical/Secretarial programs received higher-than-average or exceptionally high ratings across a majority of the items considered. Aeronautics/Mechanics, Food Service/Technology, Cosmetology, and Travel/Tourism were also substantially above average on about half of the evaluative items, or otherwise close to District averages.

On the other hand, Nursing, Data Processing, and Fire Science programs showed up significantly below District averages on a majority of the evaluative items considered. Respiratory Therapy, Business/Administration, and Business/Management also showed a predominantly lower-than-average pattern for a number of evaluative items.

Other programs revealed mixed patterns, with some high and some low ratings, or were, for the most part, close to average ratings for the District in each subsample year. In the case of some programs, especially those which were small to begin with, the numbers of responses in each subsample year were not sufficient to justify making individual program comparisons. (Programs for which response was

not great enough in any one subsample year for comparative analysis include: Environmental Technology, Technical Illustration, X-ray Technology, Gerontology, Machine Tool Technology, Welding Technology, Business/Transportation, Business/Banking and Finance, Business/Legal Secretarial, Merchandising, Educational Assistant.) Also, with many programs, responses in one or another of the subsample years were too small, and so no comparisons with District averages were made for that year. It is one of the inherent limitations of a low-response single-mailing survey of this type, as it has been executed this year, that it yields less dependable information on small programs.

It should be remembered that the preceding analysis has served only to flag certain programs as either exemplary or in need of attention. It does not tell the whole story about any program. More careful in-depth analyses of selected individual programs are a necessary next step before a complete statement can be made about a single program. Many questions still remain to be answered about each program, some of which can be pursued with this data set: What student background factors are associated with high or low rated programs? What employment patterns seem to go along with higher or lower evaluations?

It is beyond the scope of this report to attempt to ask all such questions of each program. As District and College priorities for further investigation become clearer with time, such analyses can be readily performed.

Patterns of Completion and Degree of Relation Between Training and Employment for Occupational Clusters and Selected Programs

Along with the analysis of differences in each cluster's evaluation ratings, it is essential to examine, however sketchily, any differences across occupational

clusters in rates of completion, and the degree of relationship between training and employment. As before, this analysis will be extended down to the level of the individual program, where sufficient responses were received to justify doing so.

The analysis for this section will be done with the responses from the 1972 and 1974 subsamples only, as these are the only groups who have had sufficient time away from the SMCCCD occupational program (which they may or may not have completed) to assess meaningfully the relationship of their college training to their employment.

(i) Patterns of Completion

As is abundantly clear from Table 14 on the following page, the rates of completion for respondents in the 1972 and 1974 subsamples, for each cluster are particularly high. All but three of those clusters with sufficient response showed completion rates greater than 80%. This proportion is well above what is more usually expected for occupational programs in SMCCCD--about 40-50%--and probably reflects the tendency of completers to be more likely to respond to the questionnaire. However, this fact means that people's responses in the 1972 and 1974 subsamples reflect for the most part full exposure to an occupational course of study. It should also be clear that, on the whole, the different clusters are equally well represented in terms of the proportion of completers.

TABLE 14

PROPORTION OF RESPONDENTS IN EACH CLUSTER GROUP COMPLETING A DEGREE OR CERTIFICATE

Occupational Cluster	Subsample Year 1972 % Completing	1972 N**	1974 % Completing	1974 N**
1. Agribusiness, Natural Resources	(100%)	(2)*	89%	(9)*
2. Environment	—	(0)	0%	(1)
3. Transportation	90%	20	80%	30
4. Consumer and Homemaking	69%	13	100%	10
5. Communications and Media	80%	15	83%	35
6. Health Occupations	90%	50	80%	78
7. Manufacturing	100%	30	79%	42
8. Personal Service	(100%)	(5)	73%	11
9. Recreation and Hospitality	72%	11	(50%)	(6)
10. Business	77%	101	65%	162
11. Marketing and Distributing	(75%)	(4)	(78%)	(9)
12. Public Service	(88%)	(8)	96%	25

* ( ) = numbers of respondents insufficient to calculate reliable percentage.
** = numbers of respondents in each cluster group who completed program.

ii) Relationship Between College Training and Employment

The survey has at best a crude measure of the degree of relationship: what the respondent tells us in reply to question 10 on the questionnaire. A spot check of a number of questionnaires suggests that this question has some validity. In most cases, replies to question 10 appear to coincide with the questions about present job titles, occupational categories, areas of employment, and majors.

TABLE 15

PROPORTION OF RESPONDENTS IN EACH CLUSTER GROUP
REPORTING SOME RELATIONSHIP BETWEEN COLLEGE TRAINING AND EMPLOYMENT

	Proportion of Each Cluster in Each Subsample					
	1972			1974		
Occupational Cluster	% Direct*	% Direct* or Somewhat	N*	% Direct*	% Direct* or Somewhat	N*
Agribusiness, Natural Resources	(50%)	(50%)	(2)**	(63%)	(77%)	(9)**
Environment	-	-	(1)	(0%)	(0%)	(1)
Transportation	45%	80%	20	47%	57%	30
Consumer and Homemaking	46%	92%	13	50%	60%	10
Communications and Media	47%	80%	15	59%	77%	35
Health Occupations	90%	92%	50	77%	81%	78
Manufacturing	50%	87%	30	59%	76%	42
Personal Service	(60%)	(80%)	(5)	73%	91%	11
Recreation and Hospitality	36%	54%	11	(38%)	(67%)	(6)
Business	50%	88%	101	43%	73%	162
Marketing and Distributing	(50%)	(100%)	(4)	(44%)	(78%)	(9)
Public Service	(55%)	(63%)	(8)	48%	68%	25

* First column gives "% of respondents in each subsample for whom employment is directly related to training." Second column gives "% of respondents in directly related or somewhat related employment." Third column gives total number of responses for each cluster in each of the subsample years. Totals do not equal 317, 491 and 1,118 due to those returning questionnaires with blanks or those indicating a non-occupational major.

** ( ) = Number of responses insufficient to calculate reliable percentage.

As Table 15 demonstrates, a consistently high percentage of people within each cluster report their subsequent employment as either directly or somewhat related to their college training. A few notable exceptions stand out: the Recreation and Hospitality cluster in the 1972 subsample; the Transportation, Consumer and Homemaking, and Public Service Clusters in the 1974 subsample. In no case do fewer than 50% of each cluster indicate some relationship between college training and employment.

Analyzing the data somewhat more conservatively, one can consider only the proportion of respondents in each cluster reporting a "direct" relationship between college training and employment. Clusters show little difference from one another in the 1972 subsample: most show approximately half of respondents in a directly related job, although Health Occupations has a remarkably high proportion (90%) and Recreation and Hospitality a somewhat lower proportion (36%) in directly related employment. In the 1974 subsample, there is greater variation. Health Occupations again show a high proportion, as does Personal Service (Cosmetology) in direct employment. The Business, Transportation, and Public Service clusters all show proportions slightly less than half.

Carrying this analysis one step further to the level of the individual programs in the 1972 and 1974 subsamples, almost all programs show a consistent proportion of those reporting at least some relationship between college training and employment, in almost all cases above 70%. A few notable exceptions catch the eye: Aeronautics Flight Training (48%), Accounting (64%) and Telecommunications, Early Childhood Education, and Travel/Tourism, each with 60%. As with the comparison between clusters, well over half of the respondents in all but one program

find some relationship between their college experience and their jobs.

Again looking more conservatively at the data, one may locate individual programs in which a high proportion (for our purposes, 60% or more) or a low proportion (40% or fewer) of respondents have ended up in directly related employment.

Proportion with Directly Related Employment	1972 Program	1972 % Directly Related	1974 Program	1974 % Directly Related
high 60% (or more)	Nursing	89%	Nursing	74%
	Dental Assisting	71%	Respiratory Therapy	91%
			Cosmetology	73%
			Management	62%
low 40% (or fewer)	Business/ Administration	37% (86%)*	Aeronautics/Flight	38% (48%)*
			Medical Assisting	36% (55%)
			Business/Admin.	32% (77%)
			Data Processing	40% (87%)
			Accounting	40% (55%)

* ( ) = percentages of respondents in <u>either</u> directly related or somewhat related employment

The great majority of programs (for which sufficient responses were obtained from the 1972 and 1974 subsamples) show a proportion of respondents approaching half who indicate a direct relationship between college training and employment. The few exceptions are noted in the table above; probably these reflect job market conditions as much as anything else. In some cases, the non-specific nature of the occupational program may influence the results: "Business/Administration," for

example, shows a low proportion reporting a direct relationship, yet this proportion more than doubles when less direct relationship is included.

Respondents' Evaluations of Counseling/Job Placement and Co-op Work Experience Program

Certain items in the questionnaire solicited specific reactions to other data concerning the Career Counseling and Job Placement Services, and to the Co-op Work Experience Program. Although overall response rates to those items were understandably lower than those items with more general applicability, a sufficient amount of data exists regarding these services and options to allow us to make some assessment of them. Each will be considered in turn.

(i) Career Counseling and Job Placement

Seven evaluative items and four of the recommendation items in the questionnaire referred specifically to the Counseling and Placement Services of the colleges. As has been already seen in the breakdown of evaluative items by occupational clusters and programs, the availability of counselors is a matter of some concern. Questions were also directed at the quality of information provided by counselors concerning the availability of jobs, skills requirements, and salary levels. Further items asked the students' evaluation regarding the availability of vocational and aptitude questionnaires and the help given by Job Placement staff with the job-hunting process.

The table on the following page indicates the actual utilization of Counseling and Placement Services, as reported by respondents.

Utilization of Services	Proportion in Each Subsample and Total			
	1972 (N=317)	1974 (N=491)	1976 (N=1118)	Total (N=1926)
used Career Counseling	28.7%	31.6%	25.9%	27.9%
used Job Placement	19.2%	20.2%	14.5%	16.8%
Used either Career Counseling or Job Placement	42.6%	44.0%	35.6%	39.1%
	Proportion of Evening Students Only			
used Career Counseling	-	-	(17.9%)	(19.8%)

Clearly, between a third and a half of all respondents made use of either Counseling or Placement Services in each subsample. Note that a considerably lower proportion of Evening students made use of counseling than that reported for the responding groups as a whole.

Table 16 "Evaluations and Recommendations Concerned with Counseling and Placement Services," summarizes the data relevant to this analysis. It is clear from looking at the table that the average ratings given statements about the Counseling/Placement Services are on the low side, as compared with average ratings for instruction and for curricula. Four of the average ratings in Table 16 (those over 2.30) are only marginally positive, indicating that nearly as many people found Counseling Services lacking as found them effective. It should also be noted that for most evaluative items, less than half of the responding sample chose to even give a rating at all. The remainder either left the question blank or marked "doesn't apply; no opinion." The

pattern of low ratings received some reinforcement from write-in comments on questionnaires, most of which complained of difficulty seeing counselors or lack of specific help. Finally, the recommendation regarding "more emphasis on career counseling" was the third most frequently checked out of 15 possible items and represents a salient concern for more than a third of all respondents. The recommendation about increased use of Job Placement Services ranked 6th out of 15.

TABLE 16

EVALUATIONS AND RECOMMENDATIONS CONCERNED WITH COUNSELING AND PLACEMENT SERVICES

	Subsample Years and Total				
	1972	1974	1976	Total	
a. Evaluative Statements		Average Ratings:			(% Responding to Question)
counselors readily available	2.16	2.10	2.12	2.13	(82.5%)
aptitude and vocational interest questionnaires available	2.50	2.38	2.29	2.36	(48.7%)
accurate information on availability of jobs	2.47	2.31	2.25	2.32	(50.3%)
accurate information on skill requirements of jobs in my occupation	2.22	2.20	2.19	2.21	(56.3%)
accurate information on salaries, fringe benefits	2.50	2.36	2.34	2.39	(40.4%)
assistance with resume and preparation for interview	2.37	2.51	2.30	2.38	(30.4%)
Job Placement advisors willing and available	2.42	2.32	2.20	2.29	(31.6%)

(Table 16 continued...)

b. Recommendations*	Subsample Years and Total 1972	1974	1976	Total	Proportion Checking Each Recommendation (Rank Order Out Of 15)
more emphasis on career counseling	42.9%	42.4%	29.7%	35.3%	(3)
more use of aptitude and occupational interest questionnaires	20.2%	15.9%	14.9%	16.0%	(12)
more counseling related to adjustment and study habits	23.7%	23.4%	27.1%	19.7%	(10)
more Job Placement Services	29.7%	28.1%	19.7%	23.7%	(6)

* Respondents could check five of a list of fifteen possible items, which included these four.

Interpreting these findings, however, requires some care. They may be indicative of a problem that SMCCCD could seek to improve. They may also reflect the fact that counselors are an easy target for students' frustrations, particularly where these feelings grow in part from students' dealings with the uncertain world of employment. The presence of large numbers of Evening students in the 1976 subsample further complicates interpretation, as these students have had considerably less access to Counseling and Placement Services. A breakdown of evaluation ratings in the 1976 subsample, for Evening students as compared with total subsample, reveals that Evening students rate all aspects of the services significantly lower than subsample averages.

To avoid being trapped in our analysis by the fact that many students had difficulty seeing counselors or Job Placement personnel, further comparisons were made between the evaluative ratings of those who reported actually using Counseling or Placement Services versus those who did not. The results of these comparisons are summarized below in Table 17:

TABLE 17

AVERAGE RATINGS OF SPECIFIC FEATURES OF COUNSELING/PLACEMENT: FOR THOSE WHO DID OR DID NOT USE SERVICES

	Average Ratings in Each Subsample Year					
	1972		1974		1976	
Evaluative Item	not used	used	not used	used	not used	used
counselors available	2.23	2.07	2.17	2.03	2.20	2.03
aptitude and vocational interest questionnaires available	2.71	2.29	2.58	2.20	2.45	2.11
accurate information on availability of jobs	2.61	2.32	2.55	2.10	2.44	2.08
accurate information on skill requirements of jobs in my occupation	2.32	2.09	2.36	2.04	2.32	2.05
accurate information on salaries, fringe benefits	2.57	2.42	2.48	2.27	2.44	2.25
assistance with resume and preparation for interview	2.55	2.22	2.72	2.36	2.56	2.06
Job Placement advisors willing and avilable	2.72	2.21	2.72	2.10	2.54	1.98
* Approximate N	(100)	(90)	(140)	(120)	(250)	(230)

* The actual number for each item varies somewhat depending on the response rate. For almost all comparisons, the number who used Counseling/Placement is similar to the number who did not.

The results show unequivocally that those who used the Counseling/Placement Services gave much more positive ratings to the specific features evaluated than those who did not use the services. All the comparisons show a statistically significant difference (see Appendix C). All of the average ratings for those who used the services fall in the positive range; more than half of the ratings for those who did not use the services fall in the negative range of the rating scale.

The data presented here does not tell the whole story. Of critical importance is the determination of factors which influence the initial access to counselors. Further questions can and should be raised about the effectiveness of Counseling and Placement Services, as it has been shown from the preceding analysis that although receiving generally low ratings in many respects, the efforts of Counseling and Placement staff appear more well received by those who made use of them than those who did not.

(ii) Co-op Work Experience Program

Several questions in the survey focussed on enrollment in Co-op Work Experience courses while at SMCCCD, satisfaction with the quality of supervision of Co-op Work Experience, and recommendations for more use of Co-op Work Experience. The responses to these items are summarized in Table 18 on the following page.

TABLE 18

RESPONSES TO ITEMS SPECIFICALLY CONCERNED WITH THE COOPERATIVE WORK EXPERIENCE PROGRAM

Items Concerning Co-op	Subsample Years and Total 1972	1974	1976	Total
a. Enrollment				
% in Co-op Work Experience courses while at SMCCCD	26.8%	25.6%	19.1%	22.3%
b. Evaluation of Co-op supervision		Average Ratings:		
all those who responded to Item 19G	2.22	2.09	2.05	2.10
only those who reported being enrolled in Co-op	2.28	2.09	2.01	2.10
(% of each subsample responding to item 19G)	(55.4%)	(47.4%)	(42.2%)	(45.6%)
c. Recommendation	Proportion Checking the Recommendation (rank number*)			
more use of Co-op Work Experience	23% (8)	16% (12)	12% (14)	14.6%

* Rank number of 15 possible recommendations listed in Question 21, of which each respondent could check 5.

About a quarter of the 1972 and 1974 subsample years reported having participated in Co-op Work Experience programs. (The lower percentage of participants in 1976 may be due to the presence of Evening students in large numbers in that subsample.) These figures do not match, however, the proportion of the total responding sample who bothered to give a rating to the quality of Co-op Work Experience supervision, namely 46%. The discrepancy suggests careless filling out of the questionnaire; either the first item, or the last, or both are invalid.

Whether or not they report having participated in Co-op, respondents who did evaluate Co-op supervision were equally likely to give it a positive rating in each subsample year, as can be seen in the table. Along with this positive rating, however, there is no great priority placed by the majority of respondents on increasing the use of Co-op Work Experience, at least by comparison with the other fourteen recommendations listed in the questionnaire. The 1972 subsample is an exception to this point: for that subsample, increasing the use of Co-op ranked eighth out of fifteen among the recommendations. What is more, there appears to be a somewhat decreasing trend over time above and beyond any decrease in enrollment, away from extending the use of Co-op Work Experience. It is interesting to note, however, that "more practical application in course instruction" and "more emphasis on courses in specific occupational techniques," both of which can be accomplished well by a good Co-op program, ranked very high in order of priority among recommendations. Also, an <u>increasing</u> trend is seen in the proportion of respondents in each subsample year checking "more credit for work experience"—another component of a Co-op program—(12.6% in the 1972 subsample, 18.3% in the 1974 subsample, and 23.3% among the 1976 subsample).

The nature of the data regarding the Co-op program makes it difficult to draw any substantial conclusions from this analysis. It is apparently positively regarded by a majority of those who participated; although it is not seen as a high priority area for future programming, and may be decreasing slightly in proportion to occupational students involved.

Summary of Analysis in Part Three

1. The average evaluation ratings for each occupational cluster were examined and compared on selected evaluative items--those concerning overall respondents' satisfaction with the program, the clarity of program goals, the quality of instruction, the practicality of instruction, the degree of adjustment for individual differences in ability and interest, and the availability of counselors. For each item, those clusters were noted with ratings significantly higher than the District average and those significantly lower.

Most clusters showed a mixed pattern of different-from-average ratings, higher than the District average in some respects and lower in others. Three received only higher-than-average ratings (Communications and Media, Recreation and Hospitality, Public Service); one predominantly lower-than-average rating (Health). The Business cluster, due to its large size and heterogeneity showed no different-from-average ratings.

2. The high-low analysis was carried on to the level of the individual program for all clusters. Respondents from certain programs rated SMCCCD programs and services in a noticeable positive manner, significantly more favorable than District averages: Drafting, Telecommunications, Clerical/Secretarial, Aeronautics/Mechanics, Food Service/Technology, Cosmetology, and Travel/Tourism. Other programs showed predominantly lower-than-average ratings in many respects, although in only a few cases were average ratings below the midpoint of the evaluative scale: Nursing, Data Processing, Fire Science, Respiratory Therapy, Business/Administration and Business/Management.

Programs not mentioned on the preceding page were either close to the District average or had too small a response within each subsample year to allow for reliable comparisons.

3. Clusters were compared with regard to differences in rates of completion and the reported degree of relationship between training and employment. This analysis was extended as well to individual programs. High rates of completion were reported for almost all clusters and programs, probably reflecting the tendency of completers to be more likely to return the questionnaire.

The majority of programs showed approximately half of their respondents reporting a "direct" relationship between college training and employment. Several programs, especially in the Health area, had noticeably higher proportions; others, particularly in the Business area, fell significantly below the majority. When a direct or indirect relationship (i.e. "somewhat related") was considered, all programs but one (Aeronautics/Flight) had more than 50% of respondents in directly related employment.

4. Responses specifically referring to Counseling and Job Placement Services and the Co-op Work Experience program were analyzed. A general pattern of low ratings in the case of Counseling programs was explored; some evidence was put forward suggesting that those who actually made use of Counseling Services had a higher regard for them. Although the data was rather poor, Co-op appeared to be well received by those who participated, although not a high priority item among recommendations, and with some suggestion of a decreasing proportion of occupational students participating.

APPENDICES

A. Major Titles and Major Codes Included in the Study, Grouped by Occupational Cluster and Program

B. Population and Responding Sample: Description, Comparison with Actual Enrollments

C. Analysis Procedures for Comparisons of Average Ratings on Selected Evaluation Items

D. Raw Frequencies of Questionnaire Responses for Total Responding Sample, and Separately by Subsample year

E. Occupational Education Follow-up Questionnaire

F. Sample Profile for an Individual Program

APPENDIX A: MAJOR TITLES AND MAJOR CODES INCLUDED IN THE STUDY, GROUPED BY OCCUPATIONAL CLUSTER AND PROGRAM

(Note: Old major numbers are in 3-digit code; new major numbers are in 4-digit code)

I. AGRI-BUSINESS & NATURAL RESOURCES

Grouping	Majors included	Major numbers
1. Horticulture	Horticulture	309,0108,0134
	Environmental Horticulture	0133
	Ornamental Horticulture	0134
2. Landscaping	Landscape Design	308

II. ENVIRONMENT

3. Environmental Technology	Environmental Technology	0936

III. TRANSPORTATION

4. Aeronautics - Flight Training	Aeronautics - (Commercial) Pilot Training	815,0951
5. Aeronautics - Mechanics	Aeronautics - Airframe	0949
	Aeronautics - Power Plant	0949
	Aeronautics - Maintenance	812

IV. CONSUMER & HOMEMAKING

6. Home Economics	Home Economics	561,1301
	Home Making	562
	Consumer Arts & Sciences	1301
	Clothing & Textiles	1303
	Fashion Design	1331

V. COMMUNICATIONS & MEDIA

7. Drafting	Architectural Drafting	310
	Drafting	312
	Drafting Technology	0953

(V. Communications & Media, continued)

8. Technical Illustration	Technical Illustration	314,315
	Technical Arts/Graphics	0955
9. Telecommunications	Telecommunications	542
	Telecommunications - Broadcast Engineering	543,0603
	Telecommunications - Radio/TV Broadcasting	1618
	Telecommunications - Production	0613,544

VI. HEALTH OCCUPATIONS

10. Respiratory Therapy	Inhalation Therapy	452
	Respiratory Therapy	1245
11. X-Ray Technology	X-Ray Technology, Radiologic Technology	457
	Dental Lab Radiography	1225
12. Nursing	Registered Nurse - 2 year program	452,1203
	Licensed Vocational Nursing	453,1238
13. Gerontology	Gerontology, Social Work/ Gerontology	2104

VII. MANUFACTURING

14. Electronics	Electronics	816
	Electronics Technology	0933
15. Machine Tool Technology	Machine Tool Technology	818,5342
16. Welding Technology	Welding Technology	821,5341

VIII. PERSONAL SERVICE

17. Cosmetology	Cosmetology	881,3007

Appendix A: Major Titles and Major Codes Included in the Study

IX.	RECREATION & HOSPITALITY		
	18. Food Technology	Food Technology	805
		Food Technology & Management	1332
		Food Service	3002
	19. Travel/Tourism	Travel Industry Careers	0542
X.	BUSINESS		
	20. Dental Assisting	Dental Assisting	464,1230
	21. Medical Assisting	Medical Assisting	215,0518
	22. Transportation	Business - Transportation	219,0510
	23. Accounting	Business - Accounting	210,0502
	24. Banking & Finance	Business - Banking & Finance	0504
		Business - Insurance	214,0512
	25. Secretarial/ General Clerical	Business - Secretarial	218,0514
		Business - General Clerical	212,0538
		Business - Word Processing	0540
		Business - Court Reporting	0599
	26. Legal Secretarial	Business - Legal Secretarial	0513
	27. Administration	Business Administration	201,211,0501
	28. Management	Business - Management	0521
		Business - Small Business Management	0522
		Business - Industrial Management	0523
		Business - Merchandising Management	0524
		Business - Marketing Management	0525
		Business - Food Marketing Management	0532
	29. Real Estate	Business - Real Estate	0511,217
	30. Data Processing	Business - Data Processing	213,0703

XI.	MARKETING & DISTRIBUTING		
31.	Merchandising	Marketing & Purchasing	0509
		Merchandising	216,0534
		Home Furnishing Arts	1333
32.	Interior Decoration	Art - Interior Design, Interior Decoration	522,1302
		Interior Design	0203
XII.	PUBLIC SERVICE		
33.	Early Childhood Education	Nursery School Certificate	593
		Preschool Education, Early Childhood Education	0824
34.	Educational Assistant	Teacher Assistant	594
		Educational Assistant	594,0850
35.	Fire Science	Fire Science	883,2134
36.	Recreational Leadership	Recreation Leader/assist.	851,0851
		Recreation	430,2140
(37.	Administration of Justice		888,2105
	.....not included in the occupational education follow-up this year because of separate Administration of Justice study.)		

APPENDIX B: TOTAL POPULATION AND RESPONDING SAMPLE, DESCRIPTION AND COMPARISON WITH ACTUAL ENROLLMENTS

The initial run on SMCCCD master files for the fall semesters of 1972, 1974, and 1976 yielded the following numbers of declared occupational majors:

1972	Day students	3,582
	Evening students	551
	(Non-credit	0)
1974	Day students	3,942
	Evening students	565
	(Non-credit	9)
1976	Day students	4,759
	Evening students	3,183
	(Non-credit	7)
	Total	16,598

Of this total, approximately 1,500 names were duplicates; either the same name appearing in different years or within the same year at different campuses. Duplicates were removed so that the latest year of registration remained. In other words, the attempt was made to get the most up-to-date addresses possible and the most up-to-date occupational major listing in the event that an individual had changed majors.

The unduplicated listing totaled 15,000 names exactly. This total included a small percentage of "registered only" students (those who never appeared for courses or dropped all of their classes prior to census week although they were officially listed as majors, as well as an undetermined number of people who declared a major and enrolled in courses but dropped out and/or changed majors in mid-semester. The 15,000 names defined the population which received the questionnaires in the mail.

Appendix B: Total Population and Responding Sample

The numbers of names receiving questionnaires for each subsample year compares with actual enrollment in the following way. "Actual Enrollments" are based on First Census reports of the college registrars for Day students for the three respective fall semesters.

	Fall 1972		Fall 1974		Fall 1976	
	Total Receiving Survey	Actual Enrollment	Total Receiving Survey	Actual Enrollment	Total Receiving Survey	Actual Enrollment
Skyline	412	402	556	525	1,452	803
Canada	382	*	513	*	1,471	*
CSM	2,542	2,525	2,722	2,666	4,950	3,027
Total	3,336		3,791		7,873	

* figures not readily accessible at Canada; being prepared. As can be seen from these figures, the survey population for the 1972 and 1974 subsample years does not differ greatly from actual enrollment figures. These two subsample years in the survey population are both inflated somewhat by the presence of registered only students and those who have dropped out. On the other hand, the removal of duplicated names from the 1972 subsample brings that figure back to rough equivalence with the actual enrollment figures. The large discrepancy between the survey population in 1976 and the actual re-enrollment figures is presumably due to the combined effect of a large number of Evening students present in the 1976 subsample and the fact that no duplicated names were removed from the 1976 group (except those who might be simultaneously registered at two campuses).

APPENDIX C: ANALYSIS PROCEDURE FOR COMPARISONS OF AVERAGE RATINGS FOR SELECTED EVALUATION ITEMS

On several occasions, comparisons between average ratings were made: (a) between subgroups as defined by background characteristics in Part Two, Section F; (b) between the average rating for a cluster or program in a given subsample year and the corresponding District average in Part Three.

In order to aid in the interpretation of differences between average evaluation ratings, statistical criteria were used, even though the nature of the sample and population does not encourage the use of parametric statistical tests because various assumptions are not met. (Note: that respondents from each program are not a random sample of the District-wide respondent population as the confidence interval procedure assumes.)

The average rating given by respondents within a specific cluster or program in a subsample year, for example, was compared to the District average for that item for that subsample year. A confidence interval of means was set up around the cluster group average at the .05 level of confidence. If the District average rating fell outside this interval, there was considered to be a "significant difference" between cluster average and District average. For example, a rating of 2.34 for a program based on 25 respondents with a standard deviation of .75, yielded a confidence interval at the .05 level of $\pm$ .29. A District average of 1.89 would fall outside of this interval. The program average in this case would be considered significantly less favorable than the average for the District. In other words, the study treated each cluster's respondents as if it were a random sample drawn from the subpopulation for that year, and then determined the probable range on either side of the observed average rating value that other random sample averages might have taken due to chance, 95 out of 100 times.

Appendix C: Comparisons of Average Ratings

Somewhat arbitrarily it was decided to consider comparisons only where the number of respondents for a given cluster or program exceeded 10. Below that number, the average rating might be too easily influenced by extreme values of a given individual to be a meaningful representation of the larger number of individuals composing that program or cluster.

Note that the confidence intervals differed depending on the size of the cluster or program and on the size of the variance (degree of dispersion) of their scores. A larger program with less variance would have a smaller confidence interval surrounding its average ratings.

A similar procedure was followed in making comparisons between the average ratings of subgroups, only there a "confidence interval of the difference between means" was employed, again at the .05 level.

Formulas used:

a) Confidence interval of means:

$$\text{C.I.} = \pm(z_{\text{value}}) \left(\text{standard error of means}\right)$$

$$= \pm (1.96) \left(\frac{s}{\sqrt{n}}\right)$$

Where n = number of respondents in the program
s = standard deviation of the responses from these respondents

b) Confidence interval of difference between means:

$$\text{C.I.} = \pm(z_{\text{value}}) \left(\text{standard error of difference between means}\right)$$

$$= \pm (1.96) \left(\sqrt{\frac{s_A^2}{n_A} + \frac{s_B^2}{n_B}}\right)$$

Where n_A and n_B are the number of respondents in the two groups being compared, and s_A and s_B are the respective standard deviations.

APPENDIX D: RAW FREQUENCIES OF QUESTIONNAIRE RESPONSES FOR TOTAL RESPONDING SAMPLE AND FOR EACH SUBSAMPLE YEAR

Question 1: Your occupational major? (Response rate to Question 1: 94.7%)

	Subsamples			*Year	
	1972	1974	1976	Not Given	Total
	N (%)	N (%)	N (%)	N (%)	N (%)
I. Agribusiness/ Natural Resources					
1. Horticulture	2 (0.6)	8 (1.6)	19 (1.7)	2 (3.1)	31 (1.6)
2. Landscaping	0	0	0	0	0
II. Environment					
3. Environmental Technology	0	1 (0.2)	2 (0.2)	0	3 (0.2)
III. Transportation					
4. Aeronautics-Flight Training	0	21 (4.3)	20 (1.8)	0	41 (2.1)
5. Aeronautics-Mechanics	20 (6.3)	9 (1.8)	25 (2.2)	0	54 (2.7)
IV. Consumer and Homemaking					
6. Home Economics	13 (4.1)	10 (2.0)	16 (1.4)	2 (3.1)	41 (2.1)
V. Communications & Media					
7. Drafting	9 (2.8)	14 (2.9)	17 (1.5)	0	40 (2.0)
8. Technical Illustration	0	7 (1.4)	4 (0.4)	0	11 (0.6)
9. Telecommunications	6 (1.9)	14 (2.9)	26 (2.3)	1 (1.5)	47 (2.4)
VI. Health Occupations					
10. Respiratory Therapy	0	11 (2.2)	13 (1.2)	1 (1.5)	25 (1.3)
11. X-ray Technology	4 (1.3)	7 (1.4)	2 (0.2)	2 (3.1)	15 (0.8)

* Respondents removed name and ID number from returned Questionnaire.

Appendix D: Raw Frequencies of Questionnaire Response

		1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 1 (continued)						
VI.	Health Occupations (continued)					
12.	Nursing	45 (14.2)	57 (11.6)	22 (2.0)	8 (12.3)	132 (6.6)
13.	Gerontology	1 (0.3)	3 (0.6)	9 (0.8)	1 (1.5)	14 (0.7)
VII.	Manufacturing					
14.	Electronics	20 (6.3)	29 (5.9)	56 (5.0)	1 (1.5)	106 (5.3)
15.	Machine Tool Technology	2 (0.6)	9 (1.8)	9 (0.8)	0	20 (1.0)
16.	Welding Technology	8 (2.5)	4 (0.8)	4 (0.4)	0	16 (0.8)
VIII.	Personal Service					
17.	Cosmetology	5 (1.6)	11 (2.2)	31 (2.8)	2 (3.1)	49 (2.5)
IX.	Recreation and Hospitality					
18.	Food Technology	2 (0.6)	5 (1.0)	12 (1.1)	1 (1.5)	20 (1.0)
19.	Travel/Tourism	9 (2.8)	1 (0.2)	38 (3.4)	1 (1.5)	49 (2.5)
X.	Business					
20.	Dental Assisting	17 (5.4)	1 (0.2)	10 (0.9)	1 (1.5)	29 (1.5)
21.	Medical Assisting	6 (1.9)	11 (2.2)	9 (0.8)	0	26 (1.3)
22.	Transporation	1 (0.3)	2 (0.4)	9 (0.8)	0	12 (0.6)
23.	Accounting	10 (3.2)	21 (4.3)	60 (5.4)	2 (3.1)	93 (4.7)
24.	Banking & Finance	2 (0.6)	1 (0.2)	5 (0.4)	0	8 (0.4)
25.	Secretarial/ Gen. Clerical	33 (10.4)	24 (4.9)	66 (5.9)	7 (10.8)	130 (6.5)
26.	Legal Secretarial	6 (1.9)	5 (1.0)	8 (0.7)	2 (3.1)	21 (1.1)
27.	Administration	38 (12.0)	64 (13.0)	184 (16.5)	13 (20.0)	299 (15.0)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 1, continued					
X. Business, continued					
28. Management	1 (0.3)	13 (2.6)	57 (5.1)	4 (6.2)	75 (3.8)
29. Real Estate	0	4 (0.8)	117 (10.5)	0	121 (6.1)
30. Data Processing	11 (3.5)	16 (3.3)	36 (3.2)	4 (6.2)	67 (3.4)
XI. Marketing & Distributing					
31. Merchandising	4 (1.3)	5 (1.0)	7 (0.6)	0	16 (0.8)
32. Interior Decoration	0	4 (0.8)	19 (1.7)	1 (1.5)	24 (1.2)
XII. Public Service					
33. Early Childhood Education	6 (1.9)	9 (1.8)	28 (2.5)	2 (3.1)	45 (2.3)
34. Educational Assistant	0	4 (0.8)	5 (0.4)	0	9 (0.5)
35. Fire Science	2 (0.6)	7 (1.4)	44 (3.9)	1 (1.5)	54 (2.7)
36. Recreational Leadership	0	7 (1.4)	5 (0.4)	1 (1.5)	13 (0.7)
XIII. Other					
37. Nonoccupational miscellaneous	23 (7.3)	44 (9.0)	59 (5.3)	3 (4.6)	129 (6.5)
38. Blank	11 (3.5)	28 (5.7)	65 (5.8)	2 (3.1)	106 (5.3)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 2: Did you complete a program? (Response Rate for Question 2: 95.8%)					
a. yes (AA degree)	228 (71.9)	301 (61.3)	322 (28.8)	32 (49.2)	883 (44.3
b. yes, Certificate	38 (12.0)	56 (11.4)	144 (12.9)	6 (9.2)	244 (12.3)
c. no, took courses only.	45 (14.2)	129 (26.3)	583 (52.1)	24 (36.9)	781 (39.2)
Blank	6 (1.9)	5 (1.0)	68 (6.1)	3 (4.6)	82 (4.1)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 3: You enrolled in occupational courses primarily for which of these purposes? (Multiple response item)					
a. for an Associate degree	140 (44.2)	229 (46.6)	421 (37.7)	28 (43.1)	818 (41.1)
b. for a Certificate	55 (17.4)	66 (13.4)	232 (20.8)	14 (21.5)	367 (18.4)
c. to advance in my job	37 (11.7)	44 (9.0)	276 (24.7)	11 (16.9)	368 (18.5)
d. to prepare for an occupation	207 (65.3)	309 (62.9)	492 (44.0)	41 (63.1)	1049 (52.7)
e. to retrain for a different job	14 (4.4)	28 (5.7)	138 (12.3)	5 (7.7)	185 (9.3)
f. for interest in the subject	71 (22.4)	102 (20.8)	271 (24.2)	12 (18.5)	456 (22.9)

Note: Percentages represent proportions of each respective subsample, or in the last column, the proportion of the total responding sample.

Question 4: Course enrollment included which among these types of courses? (Multiple response item)					
a. Cooperative Work Experience	85 (26.8)	125 (25.5)	214 (19.1)	20 (30.8)	444 (22.3)
b. Apprenticeship	28 (8.8)	41 (8.4)	32 (2.9)	3 (4.6)	104 (5.2)
c. Independent Study courses	16 (5.0)	33 (6.7)	90 (8.1)	5 (7.7)	144 (7.2)
d. Televised courses	7 (2.2)	20 (4.1)	38 (3.4)	3 (4.6)	68 (3.4)
e. On-campus courses	223 (70.3)	325 (66.2)	634 (56.7)	47 (72.3)	1229 (61.7)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 4 (continued)					
f. off-campus courses	38 (12.0)	45 (9.2)	91 (8.1)	10 (15.4)	184 (9.2)
g. day courses	229 (72.2)	382 (77.8)	564 (50.4)	46 (70.8)	1221 (61.3)
h. evening courses	116 (36.6)	199 (40.5)	672 (60.1)	29 (44.6)	1016 (51.0)
i. short courses	12 (3.8)	33 (6.7)	108 (9.7)	8 (12.3)	161 (8.1)
Question 5 Student Services utilized included which among the following? (Multiple response items)					
a. career counseling	91 (28.7)	155 (31.6)	290 (25.9)	20 (30.8)	556 (27.9)
b. job placement	61 (19.2)	99 (20.2)	162 (14.5)	13 (20.0)	335 (16.8)
c. learning resource or media center	53 (16.7)	126 (25.7)	219 (19.6)	12 (18.5)	410 (20.6)
d. tutoring	9 (2.8)	44 (9.0)	72 (6.4)	5 (7.7)	130 (6.5)
e. library occupational references	86 (27.1)	131 (26.7)	273 (24.4)	14 (21.5)	504 (25.3)
Question 6: Your present employment status? (Response Rate to Question 6: 99.1%)					
a. full-time	247 (77.9)	280 (57.0)	625 (55.9)	31 (47.7)	1183 (59.4)
b. part-time	25 (7.9)	104 (21.2)	269 (24.1)	24 (36.9)	422 (21.2)
c. not employed, seeking employment	15 (4.7)	25 (5.1)	112 (10.0)	5 (7.7)	157 (7.9)
d. not employed, not seeking employment	26 (8.2)	79 (16.1)	103 (9.2)	5 (7.7)	213 (10.7)
Blank	4 (1.3)	3 (0.6)	9 (0.8)	0	16 (0.8)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 7: How best described?			(Response rate to Question 7: 99.1%)		
a. Homemaker	25 (7.9)	30 (6.1)	100(8.9)	1(1.5)	156(7.8)
b. Military Service	4 (1.3)	3 (0.6)	11(1.0)	0	18(0.9)
c. Retired	0	3 (0.6)	12(1.1)	0	15(0.8)
d. Salary/Wage earner	240 (75.7)	281 (57.2)	624(55.8)	41(63.1)	1186(59.6)
e. Self-employed	13 (4.1)	26 (5.3)	76(6.8)	3(4.6)	118(5.9)
f. Student	23 (7.3)	130 (26.5)	252(22.5)	18(27.7)	423(21.2)
g. Volunteer	1 (0.3)	2 (0.4)	0	0	3(0.2)
h. Other	8 (2.5)	14 (2.9)	31 (2.8)	2 (3.1)	55 (2.8)
Blank	3 (0.9)	2 (0.4)	12 (1.1)	0	17 (0.9)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 8: Your usual occupation?			(response rate to question 8: 97.0%)		
a. Clerical/ secretarial	55 (7.4)	85 (17.3)	250 (22.4)	14 (21.5)	404 (20.3)
b. Craftsman/ mechanic	20 (6.3)	22 (4.5)	78 (7.0)	0	120 (6.0)
c. Machine or equipment operator or laborer	16 (5.0)	31 (6.3)	61 (5.5)	5 (7.7)	113 (5.7)
d. Manager/Administrator	30 (9.5)	35 (7.1)	123 (11.0)	6 (9.2)	194 (9.7)
e. Professional/ technical	96 (30.3)	114 (23.2)	172 (15.4)	10 (15.4)	392 (19.7)
f. Protective Services/ Personal or health services	38 (12.0)	48 (9.8)	54 (4.8)	6 (9.2)	146 (7.3)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 8 (continued)					
g. sales worker	17 (5.4)	35 (7.1)	117 (10.5)	8 (12.3)	177 (8.9)
h. teacher/educator	8 (2.5)	15 (3.1)	37 (3.3)	2 (3.1)	62 (3.1)
i. other	31 (9.8)	88 (17.9)	190 (17.0)	14 (21.5)	323 (16.2)
Blank	6 (1.9)	18 (3.7)	36 (3.2)	0	60 (3.0)
	317 (100%)	491 (100%)	1,118 (100%)	65 (100%)	1,991 (100%)
Question 9 In what industry?		(Response rate to Question 9: 96.3%)			
a. construction	10 (3.2)	14 (2.9)	52 (4.7)	2 (3.1)	79 (4.0)
b. communication/ transportation utilities	40 (2.6)	58 (11.8)	146 (13.1)	5 (7.7)	249 (12.5)
c. education	17 (5.4)	30 (6.1)	75 (6.7)	6 (9.2)	128 (6.4)
d. finance/insurance/ law/real estate	29 (9.1)	49 (10.0)	47 (13.1)	3 (4.6)	228 (11.5)
e. government	15 (4.7)	23 (4.7)	68 (6.1)	4 (6.2)	110 (5.5)
f. health/medical	79 (24.9)	77 (15.7)	67 (6.0)	10 (15.4)	233 (11.7)
g. manufacturing	32 (10.1)	48 (9.8)	89 (4.0)	5 (7.7)	174 (8.7)
h. retail trade	32 (10.1)	51 (10.4)	133 (11.9)	15 (23.1)	231 (11.6)
i. services	31 (9.8)	39 (7.9)	112 (10.0)	8 (12.3)	190 (9.5)
j. wholesale trade	6 (19.1)	9 (1.8)	28 (2.5)	1 (1.5)	44 (2.2)
k. other	22 (6.9)	70 (14.3)	154 (13.8)	6 (9.2)	252 (12.7)
Blank	4 (1.3)	23 (4.7)	46 (4.1)	0	73 (3.7)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 10 The relationship of your college training to your employment?		(Response rate to Question 10: 97.6%)			
a. directly related	172 (64.3)	241 (49.1)	480 (42.9)	29 (44.6)	922 (46.3)
b. somewhat related	90 (28.4)	103 (21.0)	283 (25.3)	19 (29.2)	495 (24.9)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 10 (continued)					
c. not related	35 (11.0)	81 (16.5)	222 (19.9)	14 (21.5)	352 (17.7)
d. does not apply	16 (5.0)	47 (9.6)	107 (9.6)	3 (4.6)	173 (8.7)
Blank	3 (0.9)	19 (3.9)	25 (2.2)	0	47 (2.4)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 11 Your present monthly salary?			(Response rate to Question 11:		91.5%)
a. under $200	21 (6.6)	85 (17.3)	224 (20.0)	18 (27.7)	348 (17.5)
b. $200 - $400	15 (4.7)	55 (11.2)	163 (14.6)	11 (16.9)	244 (12.3)
c. $401 - $600	30 (9.5)	57 (11.6)	96 (8.6)	4 (6.2)	187 (9.4)
d. $601 - $800	64 (20.2)	88 (17.9)	124 (11.1)	9 (13.8)	285 (14.3)
e. $801 - $1,000	66 (20.8)	75 (15.3)	100 (8.9)	14 (21.5)	255 (12.8)
f. $1,001 - $1,200	47 (14.8)	39 (7.9)	82 (7.3)	1 (1.5)	169 (8.5)
g. $1,201 - $1,400	34 (10.7)	23 (4.7)	76 (6.8)	3 (4.6)	136 (6.8)
h. Above $1,400	25 (7.9)	23 (4.7)	147 (13.1)	3 (4.6)	198 (9.9)
Blank	15 (4.7)	46 (9.4)	106 (9.5)	2 (3.1)	169 (8.5)
	317 (100%)	491 (100%)	1,118 (100%)	65 (100%)	1991 (100%)
Question 12 Have earnings increased as a result of college training?			(Response rate to Question 12:		98.4)
a. yes	137 (43.2)	180 (36.7)	274 (24.5)	24 (36.9)	615 (30.9)
b. no	83 (26.2)	120 (24.4)	388 (34.7)	17 (26.2)	608 (30.5)
c. does not apply	96 (30.3)	180 (36.7)	437 (39.1)	23 (35.4)	736 (37.0)
Blank	1 (0.3)	11 (2.2)	18 (1.6)	1 (1.5)	31 (1.6)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 13 Has your rank or position advanced as a result of such training?				(Response rate to Question 13: 98.3%)	
a. yes	119 (37.5)	163 (33.2)	229 (20.5)	18 (27.7)	529 (26.6)
b. no	91 (8.7)	128 (26.1)	393 (35.2)	22 (33.8)	634 (31.8)
c. does not apply	104 (32.8)	191 (38.9)	475 (42.5)	24 (36.9)	794 (39.9)
Blank:	3 (0.9)	9 (1.8)	21 (1.9)	1 (1.5)	34 (1.7)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 14 How difficult was it for you to find employment related to your college training?				(Response rate to Question 14: 97.9)	
a. very difficult	31 (9.8)	42 (8.6)	83 (7.4)	7 (10.8)	163 (8.2)
b. somewhat difficult	61 (19.2)	68 (13.8)	80 (7.2)	13 (20.0)	222 (11.2)
c. not difficult	164 (51.7)	193 (39.3)	292 (26.1)	22 (33.8)	671 (33.7)
Blank:	2 (0.6)	13 (2.6)	24 (2.1)	2 (3.1)	41 (2.1)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 15 How long have you been employed in your present occupation?				(Response rate to Question 15: 97.7%)	
a. one year or less	62 (19.6)	132 (26.9)	273 (24.4)	24 (36.9)	491 (24.7)
b. one - three years	100 (31.5)	153 (31.2)	243 (21.7)	16 (24.6)	512 (25.7)
c. more than three years	121 (38.2)	102 (20.8)	375 (33.5)	13 (20.0)	611 (30.7)
d. does not apply	29 (9.1)	91 (18.5)	200 (17.9)	10 (15.4)	330 (16.6)
Blank:	5 (1.6)	13 (2.6)	26 (2.3)	2 (3.1)	46 (2.3)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 Avg. (N)	1974 Avg. (N)	1976 Avg. (N)	Total Avg. (N)
Question 16 What is your present job title? (write-in responses)			(Overall response rate to Question 16: (83.4%)	
Question 17 Telephone number if additional follow-up information is needed (write-in responses)			(Overall response rate to Question 17: 78.6%)	
Question 18 Evaluation of Programs and Services - Curricula				

Entries show average evaluation ratings on each item for each subgroup and total responding group. In parentheses, the number of cases used to calculate the average (i.e., all those who responded to that item, excluding those who marked "does not apply; no opinion.")

a. satisfied needs interests	1.88 (292)	1.89 (443)	1.87 (869)	1.88 (1604)
b. core requirements fit well with program options	2.00 (274)	1.95 (392)	1.98 (759)	1.98 (1425)
c. required courses not excessive	2.00 (284)	2.06 (434)	2.01 (891)	2.02 (1609)
d. electives available in areas of my needs and interests	2.06 (292)	2.00 (451)	1.99 (972)	2.00 (1715)
e. program goals made clear on entry	1.97 (290)	2.10 (442)	2.09 (947)	2.07 (1679)
f. time to complete certificate not too long	1.91 (258)	2.07 (344)	1.97 (692)	1.98 (1294)
g. length of courses about right	1.92 (298)	1.99 (461)	1.95 (999)	1.96 (1758)
h. location of courses usually convenient	1.75 (306)	1.85 (474)	1.80 (1054)	1.80 (1834)
i. time schedule of courses usually convenient	1.95 (303)	2.02 (477)	1.99 (1065)	1.99 (1845)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 Avg. (N)	1974 Avg. (N)	1976 Avg. (N)	Total Avg. (N)
Question 19 Evaluation of Programs and Services - Instruction				
a. instructional quality above average	2.00 (302)	2.02 (469)	2.12 (1056)	2.08 (1827)
b. course objectives clear and carried out	1.97 (303)	2.01 (477)	2.05 (1066)	2.03 (1846)
c. instruction sufficiently practical	2.07 (304)	2.05 (474)	1.99 (1051)	2.02 (1829)
d. sufficient adjustment for individual differences in ability and interest	2.35 (292)	2.35 (449)	2.25 (981)	2.29 (1722)
e. evaluation of my progress was constructive	2.01 (290)	2.01 (451)	2.02 (977)	2.02 (1718)
f. facilities appropriate to subject	1.85 (302)	1.92 (469)	1.91 (1033)	1.91 (1804)
g. supervision of my Co-op Work Experience constructive and well coordinated	2.22 (176)	2.09 (233)	2.05 (470)	2.09 (879)
Question 20 Evaluation of Programs and Services - Counseling and Guidance				
a. counselors available during time I attended classes	2.16 (285)	2.10 (465)	2.12 (839)	2.12 (1839)
b. aptitude or vocational interest questionnaires made available	2.50 (183)	2.38 (268)	2.29 (480)	2.36 (931)
c. accurate up-to-date information about availability of jobs	2.47 (207)	2.31 (296)	2.25 (467)	2.32 (970)
d. accurate information on skill requirements for my occupation	2.22 (226)	2.20 (329)	2.19 (531)	2.20 (1086)
e. accurate information on salaries and fringe benefits	2.50 (175)	2.36 (234)	2.34 (376)	2.38 (785)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 Avg. (N)	1974 Avg. (N)	1976 Avg. (N)	Total Avg. (N)
Question 20, continued				
f. assistance with resumes, interviewing techniques	2.37 (131)	2.51 (178)	2.30 (276)	2.38 (585)
g. job placement advisors available and willing to help	2.42 (131)	2.32 (196)	2.20 (283)	2.29 (610)

	1972 N (%)	1974 N (%)	1976 N (%)	Year not given N (%)	Total N (%)
Question 21: Recommendations (multiple response question)					
a. more emphasis on courses in basic skills	95 (30.0)	163 (33.2)	374 (33.5)	33 (33.8)	654 (32.8)
b. more emphasis on courses in specific occupational techniques	161 (50.8)	253 (51.5)	541 (48.4)	26 (40.0)	981 (49.3)
c. more emphasis on interpersonal relations	70 (22.1)	110 (22.4)	251 (22.5)	13 (20.0)	444 (22.3)
d. more individualization of instruction	98 (30.9)	147 (29.9)	353 (31.6)	23 (35.4)	621 (31.2)
e. more convenience in time/location of courses	29 (9.1)	63 (12.8)	221 (19.8)	10 (15.4)	323 (16.2)
f. shorter or more concentrated courses	45 (14.2)	98 (20.0)	259 (23.2)	21 (32.3)	423 (21.2)
g. more practical application in course instruction	138 (43.5)	222 (45.2)	423 (37.9)	27 (41.5)	811 (40.7)
h. more use of cooperative work experience	74 (23.2)	80 (16.3)	130 (11.6)	7 (10.8)	291 (14.6)

Appendix D: Raw Frequencies of Questionnaire Response

Question 21 (continued)	1972 N (%)	1974 N (%)	1976 N (%)	Year not given N (%)	Total N (%)
i. more use of television or computer assisted instruction	20 (6.3)	39 (7.9)	107 (9.6)	4 (6.2)	170 (8.5)
j. more emphasis on career counseling	135 (42.9)	208 (42.4)	332 (29.7)	27 (41.5)	703 (35.3)
k. more use of aptitude and occupational interest questionnaires	64 (20.2)	78 (15.9)	167 (14.9)	10 (15.4)	319 (16.0)
l. more counseling related to adjustment or study habits	75 (23.7)	115 (23.4)	191 (17.1)	12 (18.5)	393 (19.7)
m. more job placement services	94 (29.7)	138 (28.1)	220 (19.7)	19 (29.2)	471 (23.7)
n. more use of credit for previous work experience	40 (12.6)	90 (18.3)	260 (23.3)	12 (18.5)	402 (20.2)
o. more use of credit by examination	40 (12.6)	79 (16.1)	177 (15.8)	11 (16.9)	307 (15.4)

Question 22: Would you recommend an Associate in Arts degree or a Certificate program to another person seeking to enter or advance in your occupation? (Response rate to Question 22: 92.3%)

a. yes, an associate degree	182 (57.4)	281 (57.2)	527 (47.1)	29 (44.6)	1019 (51.2)
b. yes, a Certificate	57 (18.0)	77 (15.7)	267 (23.9)	12 (18.5)	413 (20.7)
c. no, courses only	26 (8.2)	50 (10.2)	100 (8.9)	7 (10.8)	183 (9.2)
d. no, because most skills are learned on the job	22 (6.9)	33 (6.7)	71 (6.4)	4 (6.2)	130 (6.5)
e. other recommendations	18 (5.7)	27 (5.5)	55 (4.9)	4 (6.2)	104 (5.2)
Blank	12 (3.8)	23 (4.7)	98 (8.8)	9 (13.8)	142 (7.1)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)

Question 23: If you know of programs which better prepare people to work in occupation, please specify (Response rate to Question 23: 18.4%)

(write-in responses)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 24: Are you currently enrolled in an educational institution?			(Response rate to Question 24: 99.1%)		
a. Yes, full-time	30 (9.5)	160 (32.6)	364 (32.6)	18 (27.7)	572 (28.7)
b. Yes, part-time	62 (19.6)	88 (17.9)	439 (39.3)	22 (33.8)	611 (30.7)
c. No	222 (70.0)	239 (48.7)	308 (27.5)	25 (38.9)	794 (39.9)
Blank:	3 (0.9)	4 (0.8)	6 (0.5)	0	13 (0.7)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 25: If enrolled, in what type of institution?			(Response rate to Question 25: 87.0%)		
a. Canada, CSM, or Skyline	44 (13.9)	83 (16.9)	721 (64.5)	27 (41.5)	875 (43.9)
b. Other Community College	9 (2.8)	10 (2.0)	13 (1.2)	1 (1.5)	33 (1.7)
c. Trade or Technical school	7 (2.2)	7 (1.4)	9 (0.8)	2 (3.1)	25 (1.3)
d. Four-year College or University	26 (8.2)	150 (30.5)	63 (5.6)	10 (15.4)	249 (12.5)
e. Graduate School	12 (3.8)	6 (1.2)	6 (0.5)	3 (4.6)	27 (1.4)
f. Does not Apply	151 (47.6)	163 (33.2)	192 (17.2)	17 (26.2)	523 (26.3)
Blank:	68 (21.5)	72 (14.7)	114 (10.2)	5 (7.7)	259 (13.0)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 26: If enrolled, in what major?			(Response rate to Question 26: 85.7%)		
a. Liberal Arts or Sciences	22 (6.9)	56 (11.4)	105 (9.4)	7 (10.8)	190 (9.5)
b. Technical/ Business	30 (9.5)	113 (23.0)	471 (42.1)	22 (33.8)	636 (31.9)
c. Professional	32 (10.1)	69 (14.1)	156 (14.0)	9 (13.8)	266 (13.4)
d. Does not Apply	163 (51.4)	176 (35.8)	255 (22.8)	21 (32.3)	615 (30.9)
Blank:	70 (22.1)	77 (57.1)	131 (11.7)	6 (9.2)	284 (14.3)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 27: What is the highest level of education completed?			(Response rate to Question 27: 88.9%)		
a. Freshman	11 (3.5)	25 (5.1)	217 (19.4)	6 (9.2)	259 (13.0)
b. Sophomore	126 (39.7)	184 (37.5)	421 (37.7)	24 (36.9)	755 (37.9)
c. Upper Division; Junior or Senior	69 (21.8)	191 (38.9)	208 (18.6)	16 (24.6)	484 (24.3)
d. Bachelor's degree	67 (21.1)	35 (7.1)	105 (9.4)	9 (13.8)	216 (10.8)
e. Advanced degree	9 (2.8)	9 (1.8)	36 (3.2)	3 (4.6)	57 (2.9)
Blank:	35 (11.0)	47 (9.6)	130 (11.6)	7 (10.8)	219 (11.0)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 28: Do you plan to enroll in supplementary or continuing education courses at one of the three SMCCCD Colleges?			(Response rate to Question 28: 97.5%)		
a. Yes, within the next year	72 (22.7)	108 (22.0)	64 (54.9)	19 (29.2)	813 (40.8)
b. Yes, at some future time	130 (41.0)	189 (38.5)	257 (23.0)	27 (41.5)	603 (30.3)
c. No, not in the foreseeable future	111 (35.0)	184 (37.5)	215 (19.2)	16 (24.6)	526 (26.4)
Blank:	4 (1.3)	10 (2.0)	32 (2.9)	3 (4.6)	49 (2.5)
	317 (100%)	491 (100%)	1118 (100%)	65 (100%)	1991 (100%)
Question 29: Which subject areas would you plan to take courses in?			(multiple response item)		
a. Academic or general education	84 (26.5)	133 (27.1)	415 (37.1)	26 (40.0)	658 (33.0)
b. Hobby or recreation	103 (32.5)	122 (24.8)	220 (19.7)	19 (29.2)	464 (23.3)
c. Personal development	75 (23.7)	124 (25.3)	293 (26.2)	14 (21.5)	506 (25.4)
d. Vocational supplementary	100 (31.5)	144 (29.3)	433 (38.7)	18 (27.7)	695 (34.9)

(write-in responses indicating subject interest area - write-in response rate: 49.6%)

Appendix D: Raw Frequencies of Questionnaire Response

	1972 N (%)	1974 N (%)	1976 N (%)	Year Not Given N (%)	Total N (%)
Question 30: Which of the following formats of instruction do you prefer?			(multiple response item)		
a. Lecture/Discussion	128 (40.4)	233 (47.5)	620 (55.5)	40 (61.5)	1021 (51.3)
b. Laboratory/demonstration	118 (37.2)	178 (36.3)	348 (31.1)	23 (35.4)	667 (33.5)
c. Discussion groups/ Seminars/Workshops	105 (33.1)	139 (28.3)	319 (28.5)	15 (23.1)	578 (29.0)
d. Independent study, such as through TV	17 (5.4)	18 (3.7)	75 (6.7)	4 (6.2)	114 (5.7)
Question 31: Which time of day do you prefer?			(multiple response item)		
a. Morning	132 (41.6)	234 (47.7)	490 (43.8)	33 (50.8)	889 (44.7)
b. Afternoon	51 (16.1)	60 (12.2)	124 (11.1)	8 (12.3)	243 (12.2)
c. Evening	128 (40.4)	162 (33.0)	536 (47.9)	22 (33.8)	848 (32.6)
Question 32: Which time of the week do you prefer?			(multiple response item)		
a. Weekday	259 (81.7)	393 (80.0)	992 (88.7)	55 (84.6)	1699 (85.3)
b. Weekend	18 (5.7)	32 (6.5)	70 (6.3)	4 (6.2)	124 (6.2)
Question 33: Which locations do you prefer?			(multiple response item)		
a. College campus	229 (72.2)	362 (73.7)	923 (82.6)	51 (78.5)	1565 (78.6)
b. Community or neighborhood	57 (18.0)	75 (15.3)	162 (14.5)	9 (13.8)	303 (15.2)
c. Place of employment	33 (10.4)	49 (10.0)	97 (8.7)	5 (7.7)	184 (9.2)
d. Public school	19 (6.0)	21 (4.3)	55 (4.9)	0	95 (4.8)

APPENDIX E.

OCCUPATIONAL EDUCATION FOLLOW-UP QUESTIONNAIRE

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT OCCUPATIONAL EDUCATION FOLLOW-UP QUESTIONNAIRE

San Mateo County Community College District is seeking valuable information from people who have been enrolled in occupational education courses and programs at Canada College, College of San Mateo, and Skyline College.

The purpose of this follow-up questionnaire is to evaluate the training and educational programs and services offered as they relate to preparation for job entry and advancement. Information from you regarding your present employment, your continuing education, and your evaluation of programs and services can help the Colleges provide top quality occupational education.

Please assist the Colleges in meeting current needs and expectations by responding to as many of the following questions as you can. Thank you sincerely for your time and help.

-130-

I. General Information

(7-12) 1. Your occupational major?

_____

Please respond to the following questions by drawing a line through the letters representing the most accurate responses.

(13) 2. Did you complete a program?

a Yes, an Associate degree
b Yes, a Certificate program
c No, took courses only

(14-19) 3. You enrolled in occupational courses primarily for which of these purposes?

a For an Associate degree
b For a Certificate
c To advance in my job
d To prepare for an occupation
e To retrain for a different job
f For interest in the subject

(20-28) 4. Course enrollment included which among these types of courses?

a Cooperative Work Experience
b Apprenticeship
c Independent study courses
d Televised courses
e On-campus courses
f Off-campus courses
g Day courses
h Evening courses
i Short courses (less than a semester in length)

(29-33) 5. Student services utilized included which among the following?

a Career counseling
b Job placement
c Learning Resource or Media Center
d Tutoring
e Library occupational references

II. Employment Information

Please mark the one most appropriate response to each of the following questions:

(34) 6. Your present employment status?

a Full-time employment (30 hours a week or more)
b Part-time employment (Fewer than 30 hours a week)
c Not employed, seeking employment
d Not employed, not seeking employment

(35) 7. How best described?

a Homemaker
b Military service
c Retired
d Salary/wage earner
e Self-employed
f Student
g Volunteer
h Other

(36) 8. Your usual occupation?

a Clerical/secretarial
b Craftsman/mechanic
c Machine or equipment operator/laborer
d Manager/administrator
e Professional/technical
f Protective services/ personnal or health services
g Sales worker
h Teacher/educator
i Other

(37) 9. In what industry?

a Construction
b Communication/transportation/utilities
c Education
d Finance/insurance/ law/real estate
e Government
f Health/medical
g Manufacturing
h Retail trade
i Services
j Wholesale trade
k Other

(38) 10. The relationship of your College training to your employment?

a Directly related
b Somewhat related
c Not related
d Does not apply

(39) 11. Your present monthly salary?

a Under $200
b $200 - $400
c $401 - $600
d $601 - $800
e $801 - $1,000
f $1,001 - $1,200
g $1,201 - $1,400
h Above $1,400

(Please continue next column)

(Please continue next column)

(Please continue next page)

(40) 12. Have earnings increased as a result of our College training?

a Yes
b No
c Does not apply

(41) 13. Has your rank or position advanced as a result of such training?

a Yes
b No
c Does not apply

(42) 14. How difficult was it for you to find employment related to your College training?

a Very difficult
b Somewhat difficult
c Not difficult
d Does not apply

(43) 15. How long have you been employed in your present occupation?

a One year or less
b One - three years
c More than three years
d Does not apply

16. What is your present job title?

_____

(44-53) 17. It would be helpful if you could provide us with a telephone number where you could be reached if additional follow-up information is needed:

_____ _____
(Area Code) (Phone #)

III. Evaluation of Programs and Services

In this section, questions 18, 19, and 20, please rate items using the following scale:

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree
5. Does not apply; no opinion

18. Curricula

(54) 1 2 3 4 5 a The occupational program I completed satisfied my needs and interests.

(55) 1 2 3 4 5 b Basic core program requirements have fit together well with program options or electives in the occupational program I completed.

(56) 1 2 3 4 5 c The number of required courses in my occupational major has not been excessive.

(57) 1 2 3 4 5 d Elective courses in the area of my needs and interests have been available.

(58) 1 2 3 4 5 e The goals and purposes of the program in which I enrolled were made clear to me when I entered.

(59) 1 2 3 4 5 f The time required to complete the Certificate program was not too long to meet my educational needs.

(60) 1 2 3 4 5 g The length of courses I have taken was about right.

(61) 1 2 3 4 5 h The location of courses I have taken was usually convenient.

(62) 1 2 3 4 5 i The time schedule of courses I have taken was usually convenient.

19. Instruction

(63) 1 2 3 4 5 a The quality of course instruction was above average.

(64) 1 2 3 4 5 b Course objectives were usually clear and were carried out by instructors in the courses.

(65) 1 2 3 4 5 c Instruction was sufficiently practical in its application to realistic situations.

(66) 1 2 3 4 5 d There was sufficient adjustment in courses for individual differences in ability and interest.

(67) 1 2 3 4 5 e Evaluation of my progress in courses was usually constructive.

(68) 1 2 3 4 5 f Facilities for instruction were most often appropriate to subjects taught.

(69) 1 2 3 4 5 g Supervision of my Cooperative Work Experience was constructive and well coordinated.

20. Counseling and Guidance

(70) 1 2 3 4 5 a Counselors have been readily available to me during the time I attended College classes.

(71) 1 2 3 4 5 b Counselors have made available the use of aptitude or vocational interest questionnaires when I have asked for advise in selecting occupational programs.

(72) 1 2 3 4 5 c The information counselors have given me regarding the availability of jobs in my occupation has been accurate and up-to-date.

(73) 1 2 3 4 5 d The information counselors have given me regarding skills required by my occupation has been accurate and up-to-date.

(74) 1 2 3 4 5 e The information counselors have given me regarding salaries and fringe benefits in my occupation has been accurate and up-to-date.

(75) 1 2 3 4 5 f Assistance in preparing resumes and in techniques of interviewing have been available through job placement services.

(76) 1 2 3 4 5 g Advisers in job placement services were readily available and willing to help me find a suitable position.

(Please continue next column)

(Please continue next page)

IV. Recommendations

(7-21) 21. Please mark up to five items among the following curricular or service functions that you think would most improve effectiveness.

- a More emphasis in courses on basic skills
- b More emphasis in courses on specific occupational techniques.
- c More emphasis in courses on interpersonal relations
- d More individualization of instruction
- e More convenience in the time and location of courses
- f Shorter or more concentrated courses
- g More practical application in course instruction
- h More use of Cooperative Work Experience
- i More use of television or computer assisted instruction
- j More emphasis on career counseling
- k More use of aptitude and occupational interest questionnaires
- l More counseling related to adjustment and study habits
- m More job placement services
- n More use of credit for previous work experience
- o More use of credit by examination

(22) 22. Would you recommend an Associate in Arts degree or a Certificate program to another person seeking to enter or to advance in your occupation? Please mark one only.

- a Yes, an Associate degree
- b Yes, a Certificate
- c No, courses only
- d No, because most skills are learned on the job
- e Other recommendation

23. If you know of programs which better prepare people to work in your occupation, please specify:

_____

_____

V. Current and Future Education

Please mark the one most accurate response to the following questions 24 - 28:

(23) 24. Are you currently enrolled in an educational institution?

- a Yes, full-time
- b Yes, Part-time
- c No

(24) 25. If enrolled, in what type of institution?

- a Canada, CSM, or Skyline
- b Other community college
- c Trade or technical school
- d Four-year college or university
- e Graduate school
- f Does not apply

(25) 26. If enrolled, in what major?

- a Liberal arts or sciences
- b Technical/business
- c Professional
- d Does not apply

(26) 27. What is the highest level of education completed?

- a Freshman
- b Sophomore
- c Upper division; junior or senior
- d Bachelor's degree
- e Advanced degree

(27) 28. Do you plan to enroll in supplementary or continuing education courses at one of the three SMCCCD Colleges?

- a Yes, within the next year
- b Yes, at some future time
- c No, not in the forseeable future

If planning to enroll, please mark all responses that indicate your interests or preferences:

(28-31) 29. Which subject areas would you plan to take courses in?

- a Academic or general education
- b Hobby or recreation
- c Personal development
- d Vocational supplementary

(Please specify subject interest)

_____

(32-35) 30. Which of the following formats of instruction do you prefer?

- a Lecture/discussion classes
- b Laboratory/demonstration classes
- c Discussion groups/seminars/ workshops
- d Independent study, such as through television

(36-38) 31. Which time of the day do you prefer?

- a Morning
- b Afternoon
- c Evening

(39-40) 32. Which time of the week do you prefer?

- a Weekday
- b Weekend

(41-44) 33. Which locations do you prefer?

- a College campus
- b Community or neighborhood
- c Place of employment
- d Public school

THANK YOU VERY MUCH FOR YOUR HELP!

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APPENDIX F: SAMPLE PROFILE FOR AN INDIVIDUAL PROGRAM

Although not primarily intended to yield extensive and conclusive information about individual programs in each subsample year, the occupational follow-up study can provide various kinds of data broken out by individual program. Given the low response rates this year and lack of follow-up mailing, it is probably unwise to put much weight on this kind of individual program data, although the data can be suggestive of problems or good performance. (Part Three has attempted both to point up the more provocative patterns in the individual program-level data, as well as to indicate the limitations of the data base for this year.)

In the future, with more focussed sampling and intensive follow-up to yield good response rates, it would be possible to construct much more reliable "program profiles" of individual programs. Such profiles would bring together data on respondents' background, employment, enrollment, evaluation of SMCCCD programs and services, and finally, recommendations. Such profiles could be put together for all occupational programs (a somewhat laborious research task!), or alternatively, for selected programs which were deemed appropriate to look at more closely.

An example of such a program profile is included in this Appendix, using data from this year's follow-up. The choice of data to include is somewhat arbitrary. A number of alternative formats and combinations of follow-up data are possible, depending on the particular concerns of the relevant audiences for the follow-up.

The Drafting program has been taken as the sample case. Note that two profiles have been presented, one for the data from past students (1972 and 1974 subsamples) and one for the more recent students (1976 subsample). No effort has been made here to separate the data by Day and Evening Division in the 1976 subsample; it should be remembered that the 1976 subsample includes both.

UNIVERSITY OF CALIF.
LOS ANGELES

FEB 3 1978

CLEARINGHOUSE FOR
JUNIOR COLLEGES

Program: Drafting **Cluster** Communications & Media

Includes majors: Drafting Technology 0953

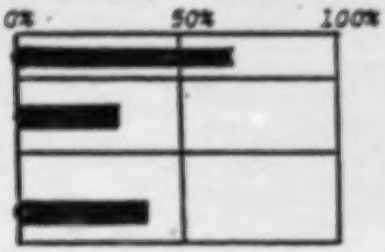
Offered at which colleges: Canada (CSM) Skyline

Recent students (data source: students enrolled in above majors in Fall 1976)

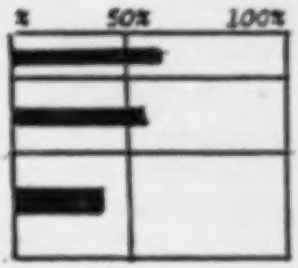
N sent Questionnaires: 156 **N Responding:** 17 **Response rate:** 10.9%

a. **Background/enrollment**

avg. age 22



b. **Employment data**



c. **Average Evaluative Ratings of Features of Occup. program** (on 4 pt. scale; 1=highest; 4=lowest)

	prog.avg.		dist.avg.
satisfied needs, interests	1.66	+	1.87
program goals clear on entry	1.69	++	2.09
teaching quality above average	1.75	++	2.12
instruction sufficiently practical	1.75	+	1.99
adjustment for individual differences in ability, interest	2.56	—	2.25
counselors available	1.94	+	2.12

(comparison of prog. avg. to dist. avg.)

+ = above district average
++ = exceptionally above avg.
- = below avg.
— = exceptionally below avg.
near or below midpoint
blank = close to dist. avg.)

d. **Most prominent recommendations**

	% of respondents checking	(N)
1. More emphasis on courses in specific occupational techniques	47%	(8)
2. More emphasis on career counseling	41%	(7)
3. More job placement services	41%	(7)

Program: Drafting **Cluster** Communications & Media

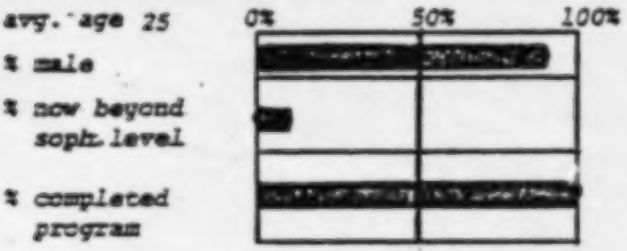
Includes majors: Arch. Drafting 310, Drafting 312

Offered at which colleges: Canada (CSM) Skyline

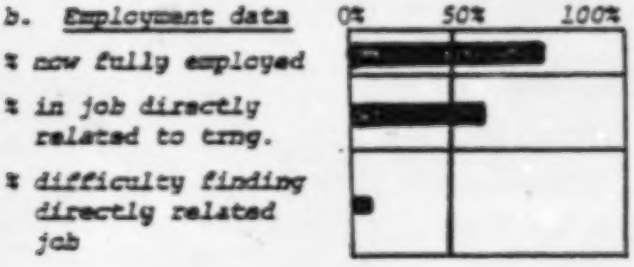
Past students (data source: students enrolled in above majors in Fall 1972,or 197

N sent Questionnaires: 194 N Responding: 23 Response rate:11.9%

a. Background/enrollment



b. Employment data



c. Average Evaluative Ratings of Features of Occup. program (on 4 pt. scale; 1=highest; 4=lowest)

	prog.avg		dist.avg
satisfied needs, interests	1.59	+	1.87
program goals clear on entry	1.65	+	1.96
teaching quality above average	1.74	++	2.13
instruction sufficiently practical	1.74	+	2.05
adjustment for individual differences in ability,interest	2.30		2.47
counselors available	2.00		2.16

(comparison of prog. avg. to dist. avg.)

+ = above district average
++ = exceptionally above avg.
- = below avg.
-- = exceptionably below avg.
near or below midpoint
blank = close to dist. avg.)

d. Most prominent recommendations	% of respondents checking	(N)
1. More emphasis on courses in specific occupational techniques	65%	(15)
2. More emphasis on courses in basic skills	57%	(13)
3a. More individualization of instruction	30%	(7)
3b. More practical application in course instruction	30%	(7)
3c. More counseling regarding adjustment or study habits	30%	(7)